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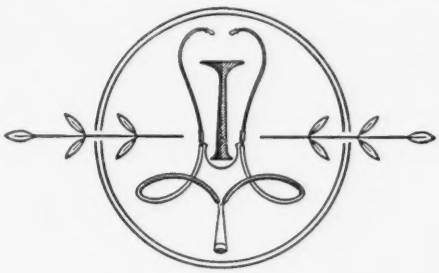

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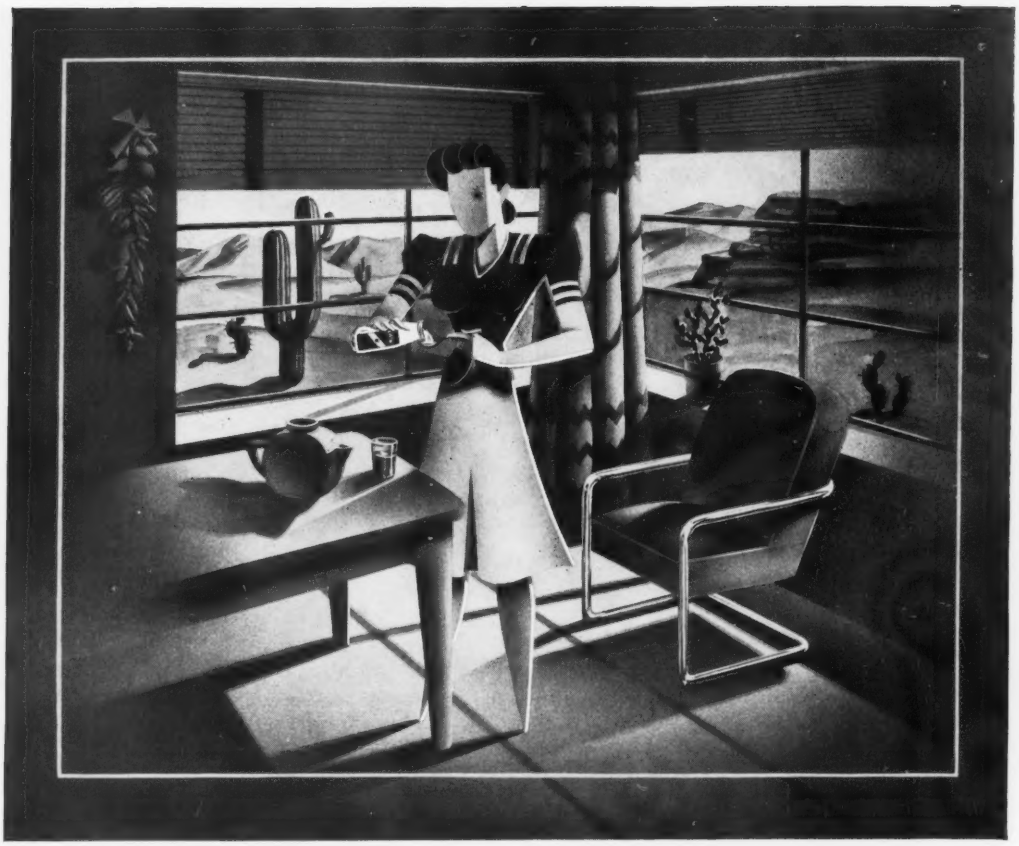

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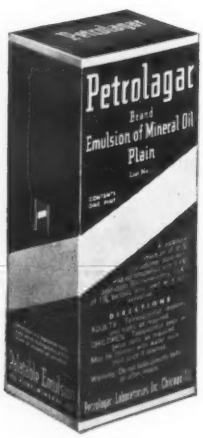

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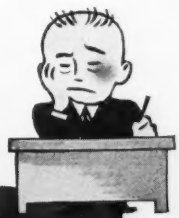

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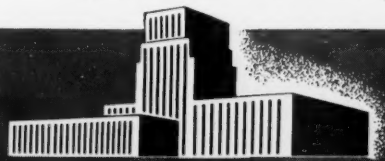

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THE DIET OF THE DOCTOR*

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St. Louis, Missouri

Although the advance in the knowledge of nutrition has been phenomenal in the past twenty years there has been a lag in the application of this knowledge by the laity to their own eating habits. The people are indeed diet conscious as is testified by the pages devoted to diet appearing in magazines and newspapers. Naturally the people turn to their family physicians for information regarding what they should eat in order to be healthy and I believe that the doctor should be able to answer their questions. He can be best able to answer them if he has himself eaten a diet which gives him optimum amounts of the proper nutrients. He will be a much better adviser if he has himself practiced good nutrition or, in other words, "practiced what he preaches." It ought to be possible for the nutritionist to convert what he knows about the proper amounts of minerals and vitamins into simple terms that anyone can apply to his own personal diet. The purpose of this paper will be to present simple rules, the following of which will result in the optimum intake of the proper nutrients. We will take as the brief of this presentation a diet for a doctor of average height and weight who, in the course of his practice, might require, say, 2400 calories. After the presentation of these simple rules we will justify them by showing how they result in the ingestion of optimum amounts of a few of the nutrients which are most apt to be deficient in the diet of the ordinary individual.

OPTIMUM STANDARDS OF NUTRITION

I should first like to discuss what is meant by the words "normal diet" or what standards we should use in measuring the amounts of the various nutrients that should be ingested by an adult individual. The advance in our knowledge of nutrition has been largely based on the experimental use of animals whose diets can be scientifically and accurately administered and measured. Nutritionists use three terms in referring to the amounts of the nutrients fed to an animal. A minimum requirement means the amount necessary to prevent the development of the nutritional disease or that which will cure the specific deficiency disease. An adequate amount of nutriment means the amount which will not only prevent or cure the occurrence of a deficiency state but will insure an adequate rate of growth. Finally, an optiumum diet means not only an adequate rate of growth but a state of health which implies long life and every evidence of vigorous health.

It has been shown, for instance, that the amount of calcium sufficient to prevent rickets in animals is only a fraction of that amount which will result in the storage of bone salts to such an extent as will give the optimum ash analysis. An animal may grow normally but his bones may not prove on analysis to show the optimum storage of the bone salts. The amount of vitamin A that prevents the deficiency disease xerophthalmia is only one-half the amount of A which is necessary for the perfect adaptation of vision in the dark or dim light or the amount of A which cures xerophthalmia in rats is only a fraction of the amount which must be necessarily fed in order to result in the optimum storage of the vitamin in the liver. Again, the amount of thiamin which prevents polyneuritis in animals is but a small fraction of the amount required for optimum growth or the amount which results in a saturation of the body with the vitamin so that an excess is excreted in the urine. The amount of vitamin C, ascorbic acid, which will prevent scurvy in the human being is in the neighborhood of twenty-five to thirty milligrams per day but the amount of vitamin C which is required to saturate the body so as to result in the excretion in the urine of a considerable amount is two to four times the amount needed to cure scurvy or, sixty to 100 milligrams per day.

Another standard that is used by the nutritionist is the amount of a nutriment that will not only produce normal growth and development but will result in healthy litters of offspring and will allow the mother to furnish an adequate amount of milk for the growth of the young. A diet is not optimum

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in this respect unless, when it is continued into the second and third or more generations, it still results in optimum growth and nutrition. Sure has lately shown, for instance, that the amount of vitamin B necessary for lactation in the rearing of young is five or six times that amount which will cure polyneuritis.

Still another standard is the span of life of animals. The ideal life for an animal as well as for a human is a short, rapid period of growth resulting in early maturity with a long period of adult vigor and usefulness with a short period of senility. In this respect McCoy has shown for rats that a diet containing the optimum quantity of vitamins with a minimum quantity of calories results in the longest span of healthy, mature life.

It is apparent, therefore, it seems to me, that the individual who says "My health is perfect, therefore my diet must be good" may be entirely erroneous because experimental animals apparently healthy may, as a matter of fact, be shown to be quite deficient in the proper nutrients resulting in early death or inability to rear healthy young.

In deciding what is the proper amount of various nutriments which constitute optimum nutrition we can only depend on the facts that are at present available bearing in mind that the future may reveal that to avoid the degenerative diseases these amounts of nutrients which we now consider optimum will have to be revised.

Most assuredly we have not yet discovered all the vitamins. The latest experimental work clearly reveals this. The discovery of the newer vitamins is brought about by the use of combinations of the vitamins that can be purified in the chemical sense. When one gives an animal a diet of pure casein, crystalline sugar, pure fat, crystalline salts and the proper amounts of the purified vitamins that are now known, the animal will not grow at the optimum rate unless extracts of liver or yeast be added to the diet. This clearly indicates the presence of some unknown vitamins. At present, besides protein, fat and carbohydrate, there are thirteen, perhaps more, minerals that are necessary for nutrition. There are at least eleven vitamins that have been purified in the true chemical sense.

The minerals that are known to be necessary for nutrition: calcium, phosphorus, sodium, chlorine, potassium, sulfur, magnesium, iron, iodine, copper, zinc, cobalt, mangenese.

The vitamins that are now prepared in chemically pure form: Fat soluble:

Vitamin A—carotene
Vitamin D—calciferol and seven-dihydrocholesterol
Vitamin E—the tocopherols
Vitamin K—the naphthoquinones

Water soluble:

B complex—thiamin
riboflavin
nicotinic acid
B_6
pantothenic acid
choline
Vitamin C—ascorbic acid

SIMPLE RULES FOR AN OPTIMUM DIET

Milk. For the adult one pint of fresh milk per day or half pint of condensed milk. For the child one quart of fresh milk per day or one pint of condensed milk. For the pregnant and lactating mother one and one-half to two quarts of fresh milk per day. One ounce of cheese is a good substitute for one-half pint of milk.

Egg. One egg a day or at least three a week.

Vegetables. Potatoes—a large helping equal to two-thirds of a measuring cupful or one-third pound. Two or three helpings of a half cup each of one of the watery vegetables such as the green leaves, tomatoes, peas, carrots, snap beans, or cabbage.

Fruits. Two servings a day amounting to three-fourths pound.

Meats. One large serving a day amounting to one-third of a pound or three to four ounces.

These five groups of foods in the quantities set forth furnish the optimum amount of vitamins, most of the minerals and the protein needed for growth.

The sixth group of food stuffs are the bread stuffs and sugar whose function is to furnish calories. In this group we include bread, biscuits, rolls, crackers, cake, cookies, pies, macaroni and rice.

THE PROOF THAT THESE RULES FURNISH THE OPTIMUM AMOUNT OF THE NUTRIENTS WHICH ARE MOST APT TO BE DEFICIENT IN OUR DIETS

The following diet follows the rules above set forth. It amounts to 2400 calories which is sufficient for the average doctor.

2400 Calories	(Calories)	
Milk—1 pint	332	
Butter—1 oz. (30 g.)	234	
Egg—1	69	
Meat—150 gms. (⅓ lb.)	512	@ 275 per 100 g.
Potato—150 gms. (⅔ c.)	126	
Water veg.—3 servings (¾ lb., 300 gms., 1¼ c.) Tomatoes, string beans, peas, greens, carrots, cabbage.	60	@ 20 per 100 g.

Fruits—2 servings (1¼ c., ¾ lb., 300 gms.)	180 @	60 per 100 g.
Citrus fruits, prunes, peaches, apricots, bananas, apples, pears.		
Bread—3 slices (75 gms.)	180	
Chocolate cake—1 serving	433	
Fat (used in cooking)—1 oz.	270	
	2396	

Let us analyze this diet for a few of the nutrients which are most frequently found deficient in our diets.

Calories: Figure I shows the distribution of the calories in this diet. If one wishes to reduce the calories without interfering with the amounts of vitamins the elimination of chocolate cake and the fat used in cooking would reduce the calories by 700. We have taken chocolate cake as a sample of pastries as they are consumed by Americans. Pie could be substituted for the cake. We have not listed cream but an ounce of cream, the usual amount placed in a cup of coffee, is equal to approximately a serving of butter or that amount that is spread on a slice of bread. The amounts of vegetables and fruits is more than is eaten by the average person but we wish to show that these amounts are highly desirable.

The two minerals which are commonly deficient in our diets are calcium and iron.

Calcium: Figure II shows the distribution of calcium. Sixty-five per cent of the calcium in this diet is derived from the pint of milk. We hear much about the vegetables as a source of minerals but a glance at this figure shows even where vegetables and fruits are present in unusual amounts, a diet still depends on the milk as the main source of calcium. The total amount of calcium in this diet is 880 milligrams. The normal amount as given by Sherman and generally agreed to by nutritionists is 680 milligrams. Thus we have 200 milligrams in excess of the normal requirement. It is practically impossible to ingest a normal amount of calcium without milk being present in the amount of a pint a day.

Iron: Figure III shows the distribution of iron. The iron from meat and egg is without doubt available to the body. It is doubtful if the iron from milk is available at all, and certainly it has been shown that some of the iron from the vegetables is not available. The normal requirement for iron is from eight to fifteen milligrams per day. In this diet six milligrams is derived from eggs and meat. The proper amount of iron in a diet is the best insurance against the development of simple anemia but when the latter occurs it is generally admitted that one must depend upon iron salts administered as such.

Vitamin A: Figure IV shows the distribution of vitamin A. In calculating the vitamin A of this diet we took peas, tomatoes, and string beans as the vegetables. Vegetables vary a great deal in their content of vitamin A or carotene. The green leaves as represented by spinach, kale, dandelion, turnip or beet tops contain enormous quantities of carotene ranging from 10,000 to 40,000 units per serving. Carrots contain 5700 units per serving, tomatoes 2,000, peas 1300, string beans 1000, while asparagus, cabbage, onions and turnips contain none. In the above diet we have selected for the fruits orange or grapefruit juice, one-half cup, one apple, and a serving of peaches. Just as is the case with the vegetables fruits vary a great deal in their content of vitamin A. Those richest in this vitamin are apricots, peaches and prunes. Bananas contain a good amount but apples, the citrus fruits, pears and pineapple contain very little. The green vegetables contain more carotene than any other source. The source of vitamin A in fruits in this diet comes from the peaches. Milk, butter and eggs account for the remaining source of vitamin A, about 2800 units. The normal requirement of vitamin A has been agreed upon as in the neighborhood of 5000 International units. This diet, because of its selected fruits and vegetables, contains 72000 International units, a goodly excess above the optimum requirements. Of late it has been shown that carotene is at least only one-half as efficient as vitamin A itself in the control of night blindness in animals as well as man. This means that the vitamin A from vegetable source (vitamin A in vegetables and fruits is in the form of carotene) is needed in twice the amounts as vitamin A itself (dairy products, eggs and liver contain the vitamin itself). Figure IV demonstrates how little vitamin A comes from meat, potatoes, bread stuffs and fat.

Thiamin: Figure V shows a distribution of thiamin B_1. Although we have been told that the best sources of this vitamin are from whole cereals, nevertheless, the latest analyses of meats show that they play a much more important role as a source for thiamin than was formerly supposed. In fact, one serving of pork a day will supply the whole of the requirement of this vitamin. Pork is about three times richer in B_1 than beef. Vegetables, milk, and fruits are the next best sources. If for the white bread we substituted whole wheat bread the thiamin would be increased by ninety-six International units. Undoubtedly, whole wheat bread is an additional guarantee for the adequate intake of thiamin and I believe that doctors would do well if they practiced taking whole wheat bread instead of white. The distribution of thiamin in vegetables and fruits is fairly consistent, the exceptions being potatoes and peas which are unusually good sources. The normal

intake of thiamin should be from one to two milligrams a day or 300 to 600 International units. The diet as above given contains 470 International units.

Riboflavin: Figure VI shows the distribution of riboflavin. Riboflavin like thiamin is a water soluble vitamin. Its distribution in vegetables and fruits is similar to thiamin. In the case of milk, however, there is a great deal more riboflavin than thiamin so that milk is the best source for this vitamin. Like thiamin the meats contain good amounts of riboflavin so that they stand as the next best source. The vegetables and fruits, even in the amounts here suggested, would hardly suffice for a source of this vitamin. The normal intake of riboflavin should be in the neighborhood of one to two milligrams or about 500 Sherman units per day. This diet furnishes 750 Sherman units.

Nicotinic Acid: Nicotinic acid, the third of the B vitamins that we are analyzing, has not been quantitatively analyzed in foods. We do know, though, from the tables of Sebrell, the foods that are a good, fair, slight or no source for this vitamin. By good he means an amount that will prevent or cure pellagra. The following is a list of the foods in our diet as classified by Sebrell: Good—meat and eggs; fair—milk and vegetables; slight—butter; none—potato, fruit, cake, bread. We believe that this diet contains sufficient amounts of milk, egg, meat and vegetables to form an abundant source for nicotinic acid.

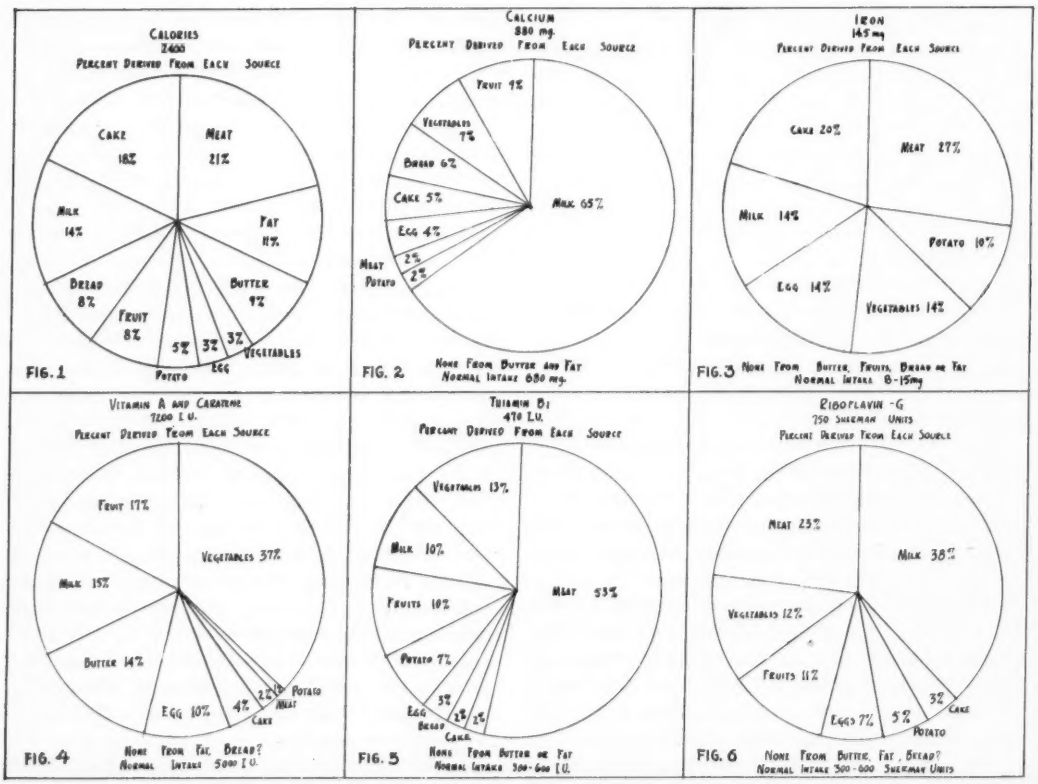
NICOTINIC ACID

Sebrell's Classification of Sources:

Good	Fair	Slight	None
Meat	Milk	Butter	Potato
Egg	Vegetables		Fruits
			Bread
			Cake
			Fat

Normal intake twenty-five mg.

Ascorbic Acid: Figure VII shows a distribution of ascorbic acid. The sources for this vitamin are limited to fruits and vegetables. Of the fruits the citrus group are in a class by themselves. Bananas, apples, peaches and pineapple contain moderate amounts, while apricots, pears and prunes have very little. The only rivals for the citrus fruits are the green vegetables. Unfortunately vitamin C is very soluble and we cook the green vegetables in water. It has been shown that half of the vitamin C is lost in the cooking water since it is our custom to throw



away the water in which vegetables are cooked. Thus, a serving of the green vegetables will give only about half the amount of vitamin C that is present in an equal amount of the citrus fruits. The other vegetables contain good quantities of vitamin C particularly cabbage, peas, tomatoes and turnips. If one consumes enough of these vegetables it is entirely possible to get a normal intake of vitamin C without ingesting any fruit. The normal intake of vitamin C is from sixty to 100 milligrams a day which amounts to one to 2000 units. 1000 units probably is adequate. The above diet contains 1800 International units of vitamin C.

THE VALUE OF EACH CLASS OF FOOD STUFFS

We have just shown the sources of some of the nutrients that are of special importance in our diet. Now let us review each class of food stuffs and show for what nutrients it is a particularly good source.

Milk is the one important source for calcium.

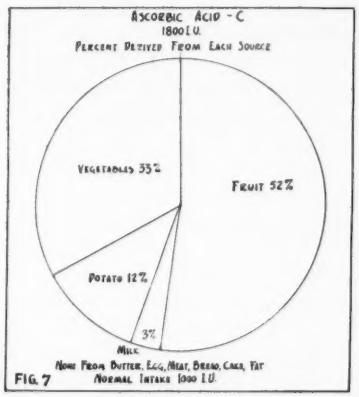


FIG. 7

Since man does not eat bones he must depend on the calcium of milk. In addition it is an important source for vitamin A, riboflavin, nicotinic acid and when irradiated, vitamin D. The quality of milk protein is excellent. It is a fair source for thiamin.

Butter is an important source for calories and vitamin A.

Egg is an important source for protein, iron, vitamin A and nicotinic acid.

Meats are an important source for calories, protein, phosphorus, iron, sulfur, thiamin, riboflavin, nicotinic acid, choline and pantothenic acid.

Liver is a veritable storehouse for many of the vitamins—iron, copper and its protein is of very high value. Liver once a week is an excellent dietary practice.

Potato is an important source for ascorbic acid and since we almost always eat it with fat, it forms an excellent source of calories.

The watery vegetables are important sources for potassium, nicotinic acid, thiamin, riboflavin and ascorbic acid. Furthermore, when eaten in sufficient quantities they lend bulk to the feces and help in the normal evacuation of the bowels.

Fruits are a good source for potassium. Apricots and prunes are a good source for iron and fruits add riboflavin, thiamin, ascorbic acid and carotene to the diet. Like the vegetables they help in the elimination of the bowels.

The five classes of food stuffs—dairy products, egg, meats, watery vegetables and fruits are protective foods, that is, they guarantee those nutrients which experimental work proves are necessary for growth, vigorous adult life, long life and the production of healthy young.

The bread stuffs and sugar are our main source for calories but they also are an important source for protein. Whole wheat cereals and bread are important sources for iron, copper and thiamin.

The fats besides being a good source for calories are an excellent source for B_6 which late work seems to show is necessary in human nutrition. In the vegetable fats are found the tocopherols which in animals are necessary for reproduction but have not been proven in man to be essential in this respect. Furthermore, the fats are sources for the unsaturated fatty acids which in animals at least are necessary for proper metabolism of fats.

CONCLUSIONS

It has been shown that very simple rules can result in what we believe to be the optimum intake of the nutrients as they are now known. It is to be emphasized that it is a quantity of the protective food stuffs which is the most important consideration.

An airplane pilot who is not provided with oxygen begins to lose his mental and physical efficiency at an altitude of about 12,000 feet, Harry G. Armstrong, Toronto, Canada, states in Hygeia, The Health Magazine. His symptoms are pronounced at 18,000 feet. Between 18,000 and 22,000 feet his actions are like those of a drunken man, and he becomes either sleepy or very active with outbursts of laughter or rage. At about 25,000 feet unconsciousness occurs and unless descent to a lower altitude is made death results within a few minutes.

Let us as physicians, endowed with the degree M.D., start to place emphasis on that degree. No one else can use it. Use "M.D." in your speech, in your correspondence, on your signs, prescription pads, bill heads, etc. Gradually the public will start to discriminate. In this positive way we can gradually but most effectively offset the parasitic influence of so-called "doctors" who are not M.D.'s—Rochester Medical Bulletin.

AN OUTLINE OF THE TREATMENT OF ACUTE INTESTINAL OBSTRUCTION*

Thomas G. Orr, M.D.

Kansas City, Kansas

For purposes of discussion, the treatment of acute obstruction of the small bowel may be considered under the following headings:

1. Operation.
2. Restoration and maintenance of water and chemical balance and nutrition.
3. Prevention and relief of bowel distention by decompression.
4. Use of peristaltic stimulants.
5. Application of heat to the abdomen.
6. Oxygen therapy.
7. Bed posture.
8. Transfusions.

OPERATION

Early operation is always indicated when the bowel lumen is mechanically occluded. This does not mean that immediate operation is always advisable. The time and method of operation must depend upon the type and location of the obstruction and the condition of the patient. The experience of recent years has emphasized the importance of supportive treatment both before and after operation. If the obstruction is of short duration and the patient has not been seriously depleted, operation may be done at once, but if dehydration, hypochloremia, abdominal distention and rapid pulse have developed, preoperative administration of sodium chloride solution and gastric and intestinal suction are always indicated to improve the patient's general condition. While this preliminary treatment is necessary to minimize the operative risk, it is equally important that such treatment should not be prolonged beyond a few hours before surgical relief is instituted. Since patients receiving supportive treatment may show very definite general improvement it is appropriate to warn against delaying operative treatment on the false assumption that operation may not be necessary.

Simple occlusion of the intestine can usually be relieved by direct removal or release of the cause of the obstruction. However, certain conditions may be found or complications may arise during the operation which make it necessary to resect or repair portions of the bowel, thereby adding to the operative hazard. Any unnecessary handling or attempts to empty the intestine by stripping are to be avoided.

If strangulation of the bowel is suspected, early operation is urgent to avoid necrosis and the danger of peritonitis from rupture of the necrotic segment. Release of the constriction interfering with the circulation may be sufficient providing the surgeon is positive that the blood supply returns to the gut, insuring its viability. If irreparable necrosis has resulted, the extent of operation must depend upon the patient's general condition. Frequently it is much safer to exteriorize the necrotic segment and remove it after closing the abdominal wall, leaving the open ends of the gut protruding to be closed at a later date by anastomosis or by the Mickulicz technic. Operative procedures upon acutely distended gut are always dangerous. In a patient acutely ill with obstruction, resection and anastomosis not only consume valuable time, but the danger of peritonitis is great. Leakage from the distended gut of intestinal obstruction usually means disaster.

Enterostomy as a treatment for mechanical intestinal obstruction is always an operation of necessity and not of choice. There are indications for its use both as a primary and as a supplementary procedure. In those patients who are too ill for exploration and release of an obstruction, enterostomy may be life-saving. After relief of an obstruction, enterostomy is often advisable to drain a markedly distended bowel or to protect a damaged gut wall or suture line. It is not free from danger. Peritonitis and abdominal wall infection may result from leakage of intestinal contents when a tube and sutures are placed in an overdistended gut wall. The danger of enterostomy may be reduced to a minimum by isolating a segment of bowel with intestinal clamps and by aspirating all gas and liquid content before placing sutures and introducing the tube. Thoughtful care must be used in selecting the proper patients for enterostomy. An error leading to a fatality may be made if enterostomy alone is done for an obstruction due to a strangulated section of the bowel. When an abdomen is opened and bloody fluid is found, the surgeon should definitely assure himself that no strangulation of the gut is present before enterostomy is done. Enterostomy will not successfully drain the bowel if it is paralyzed. Peristalsis must be present to force the liquid and gas content of the gut through the enterostomy tube. High jejunostomy is of very doubtful value in the treatment of any type of obstruction. The logical place for intestinal drainage by enterostomy is just proximal to the point of obstruction. It is the author's opinion that the suction method emphasized by Wangensteen[1] is far more efficient in emptying the stomach and upper intestine than high jejunostomy.

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When an enterostomy is done, the technic of Witzel or one of its modifications, using a size sixteen or eighteen French rubber catheter, is the safest operation. After the catheter is fixed in the gut, it should be passed through the omentum and when possible the omentum fixed to the suture line for added protection against infection and adhesions.

RESTORATION AND MAINTENANCE OF WATER AND CHEMICAL BALANCE AND NUTRITION

In any obstruction of the small intestine, dehydration soon becomes a factor of prime importance due to lack of liquid intake and vomiting. To restore and maintain a sufficient supply of water for the proper functioning of the chemical processes of the body is one of the most essential phases of the treatment of bowel obstruction. As emphasized above, the parenteral administration of water and sodium chloride should precede operation in all cases showing the effects of dehydration and should be continued after operation until the patient is able to drink and retain a quantity of water sufficient to supply the body needs.

The initial quantity of water needed varies much, depending upon the anatomic location and duration of the obstruction. The general appearance of the patient is a helpful guide. The daily intake for the normal individual under usual conditions varies from two to three liters. In cases of intestinal obstruction, it must be recognized that the lack of normal intake does not present the total loss of liquid to the body. The secretions into the stomach and upper intestine are also lost by vomiting or through the suction tube. The loss may at first amount to several liters per day.

By clinical experiments, Maddock and Coller[2] have been able to estimate with considerable accuracy the fluid needs of the dehydrated patient. When a patient is first seen with signs of dehydration, such as a hot dry skin, a dry tongue, sunken eyes, rapid pulse, a slight fever, and insufficient urine output, these authors have estimated that there has been a loss of liquid approximately equal to six per cent of the body weight. A patient weighing sixty kilograms would therefore require six per cent of 60,000 Gm. or 3,600 c.c. as an initial supply of water to relieve existing dehydration. The quantity of water estimated for the daily uses of the adult body are two liters for water of vaporization (loss through skin and lungs) and one and one-half liters for urine. It is, therefore, evident that a seriously dehydrated patient would require in the first twenty-four hours 3,600 c.c. plus 2,000 c.c. plus 1,500 c.c. to restore and maintain water balance. In addition to this requirement, any losses by vomiting, bleeding, fistulas, diarrhea, or massive exudation should be estimated and the quantity restored to the body. After the initial supply of water, the average daily necessary intake may be estimated as 3,500 c.c. This quantity should be decreased as the patient is able to retain food and liquid given by mouth.

Obstructions of the intestine causing a loss of upper alimentary tract secretions are often associated with marked chemical changes in the body which may be demonstrated by blood examination[3]. This loss is particularly marked if the obstruction is high or prolonged. The important blood changes are a loss of chlorides (hypochloremia), an increase in the carbon dioxide combining power and an increase in the non-protein nitrogen. After prolonged starvation, a disturbance in nutrition may be sufficient to decrease the blood serum protein[4,5]. Chemical changes assume less importance in those cases in which there is early relief of the obstruction. The best gauge of the extent of body chemical change is an estimation of the blood chlorides. In the treatment of intestinal obstruction the blood chlorides should be restored to normal and maintained within normal limits. By so doing, the acid-base imbalance is corrected, destruction of body protein minimized, and proper water distribution to the body tissues assured. After a marked reduction has occurred in the blood serum protein, excessive quantities of sodium chloride may result in edema of the subcutaneous tissues or edema of the lungs.

It is quite evident that metabolic equilibrium cannot be maintained when food cannot be taken by mouth and utilized by the body in a normal manner. It is also quite true that food supply is of much less importance than water supply in the treatment of intestinal obstruction. Dextrose may be freely given, however, to such patients and will partially furnish the needed nutrition.

Water, sodium chloride, and dextrose may be given in the vein under the skin and by rectum. Patients entering the hospital with marked hypochloremia may be given 250 to 500 c.c. of two and one-half per cent sodium chloride solution by vein to promptly restore the chlorides to normal. Coller and his associates[6] have estimated that for each 100 milligrams reduction in plasma chlorides the patient should be given 0.5 Gm. of sodium chloride per kilogram of body weight. In most cases a physiologic solution will suffice. Dextrose in five per cent solution is preferable to higher percentages to avoid the dehydration effects of hypertonic solutions. It is unwise as well as unnecessary to give hypertonic solutions under the skin. Subcutaneous tissues tolerate well physiologic sodium chloride solution alone or in combination with five per cent dextrose. Ringer's or Hartmann's solutions may be used instead of the plain sodium chloride solution and are preferred by

many clinicians. Of the methods cited above for administering solutions, phleboclysis and hypodermoclysis are, from the standpoint of quantitative accuracy, more dependable than proctoclysis. Proctoclysis is satisfactory when it works properly, but too frequently the solution is expelled by the sick patient and an accurate estimation of the body intake is impossible. The discomfort incident to increased distention by water introduced into the rectum is also a valid reason for not using proctoclysis. It is also doubtful if dextrose is absorbed by the large bowel in sufficient quantity to be of value[7].

Solutions injected by any of the three methods under discussion should be given slowly. Fluids may be safely administered by vein at the rate of sixty to eighty drops per minute. The rate of absorption under the skin varies widely with different patients and should be controlled by preventing tumefaction of the part. A rapid instillation into the rectum will stimulate expulsion and loss of fluid. A very satisfactory routine method of supplying the estimated daily requirement of 3,500 c.c. of fluid is accomplished by injecting 2,000 c.c. into the vein and 1,500 c.c. under the skin. To distribute the intake throughout the day, one of these injections may be given in the forenoon and the other in the evening. The injections should be discontinued at night to avoid disturbing the patient's rest. Since embolism is considered by many a dangerous complication of continuous phleboclysis, intravenous injections in interrupted doses are preferred[8]. To control the salt intake the blood chlorides should be estimated every second day. If they are found normal or above normal, dextrose solution alone should be given until the need of sodium chloride is evident.

There is some danger of giving too much water and sodium chloride. The overburdening of a weakened circulatory system by increasing the blood volume or the production of a general edema of the lungs must be avoided[9].

PREVENTION AND RELIEF OF BOWEL DISTENTION BY DECOMPRESSION

A proper appreciation of the danger of overdistention of the bowel is essential for logical treatment. A patient is usually not dangerously ill unless there is marked distention of the stomach or intestine. Increased pressure within the lumen of the gut seriously interferes with the blood supply of its wall.

It is probable that there is no absorption of toxic products from the contents of the obstructed intestine until overdistention has damaged the circulation resulting in necrosis.

To relieve distention in the stomach and upper small intestine, continuous suction drainage by an indwelling nasal Levine tube is indicated. Siphonage with suction is superior to simple siphonage, since the former will more readily and completely evacuate the gases as well as the liquid content. The apparatus designed by Wangensteen or one of its slight modifications is ideal for this purpose. This method not only reduces the distention but permits the patient to drink water freely which adds greatly to his comfort. The nasal tube generally causes very little discomfort and may be left in place for several days. The indwelling tube is also of value in testing the return of bowel function. It may be clamped at two or three hour intervals when liquid diet is started to determine the tolerance of the bowel for liquid and food. If the aspirated quantity at the end of the closed tube period is less than the intake for that period, the tube may usually be safely removed. The Miller-Abbott[10] double lumen tube may be introduced the entire length of the small intestine above the obstruction. It is useful not only to decompress the bowel but may be of value in locating the point of obstruction.

Attempts to reduce distention by repeated enemas are of doubtful value. Enemas should be used with a full realization that gas and feces obtained from the colon by such measures may in no way affect the obstructed bowel above. One must beware of a feeling of false security which might arise after a successful evacuation of the lower bowel. Experiments have shown that the type of enema commonly used does not stimulate peristalsis in the small intestine and cannot be expected to aid in its evacuation[11].

Enterostomy as discussed above has its value in the mechanical reduction of intestinal distention.

USE OF PERISTALTIC STIMULANTS

By preventing and reducing distention of the gut, muscle tone and rhythmic contractions are maintained. As long as a bowel retains its power to contract, the blood supply to its walls is intact. A bowel wall cannot be active without an adequate circulation. Morphine stimulates the tone and rhythmic contractions of the small intestine, and may be given with assurance in sufficient quantity to make the patient comfortable[12,13]. Since sodium chloride in hypertonic solutions will stimulate peristalsis, it is reasonable to assume that it may be a factor in maintaining bowel tone when given in physiologic solution in sufficient quantity to maintain the chlorides at a normal level in the body.

The use of spinal anesthesia to evacuate the bowel is a rather drastic treatment and of doubtful value. It certainly should never be used for this purpose as long as the bowel is obstructed. Pituitary extract and similar peristaltic stimulants should be used with caution and like spinal anesthesia should not

be employed as long as obstruction exists. If peristaltic stimulants are used after the obstruction has been released, it is advisable to begin with small doses. It is the opinion of Ochsner[14] that stimulating drugs are of little or no value in the treatment of ileus. Some clinical reports, however, indicate that they are helpful in selected cases when judiciously used. Gordon[15] indicates that prostigmin is a safe stimulant to use.

APPLICATION OF HEAT TO THE ABDOMEN

Moist or dry heat applied to the distended abdomen is beneficial when judged by clinical observation. It is believed by some authors that heat has a direct effect upon the gut by increasing tone and stimulating peristalsis. Heat applied to the abdomen at a temperature of 109 degrees will penetrate to the peritoneum if there is not too much subcutaneous fat[16]. Since no known harm results from applying heat, if blistering is avoided, its use is recommended. Heat applied either as moist packs or as dry heat from electric bulbs over the abdomen seems to be equally effective.

OXYGEN THERAPY

Oxygen is probably too little used in serious cases of intestinal obstruction. With abdominal distention and changes in blood composition, the vital capacity of the lungs and oxygen carrying capacity of the blood are decreased. The recent work of Fine and his associates[17] presents a new viewpoint in oxygen therapy that may prove to be of value in reducing abdominal distention. They found that the absorption rate of gas within the bowel is increased in direct proportion to the quantity of oxygen given. Thalhimer[18] emphasizes the teaching of Haldane that mild degrees of anoxemia have serious effects upon the nervous system and moderate or severe degrees may be fatal. Oxygen therapy administered by tent, nasal tube, or oxygen room is recommended for patients who are very ill with intestinal obstruction. The administration of oxygen should not be postponed until the patient is cyanotic or the condition seems hopeless.

BED POSTURE

Comfort and vital capacity are increased by raising a patient's back rest to a semisitting posture. This position may be altered at intervals to rest the patient. Deep breathing and frequent turning are important to minimize the danger of congestion at the lung bases.

TRANSFUSIONS

The transfusion of blood as a supportive treatment for patients with bowel obstruction has been favorably recommended. It is especially indicated after an illness of several days when protein depletion is imminent. Wangensteen[19] has shown that blood loss may be considerable in volvulus, intersusception, strangulated hernias, adhesive obstructions with compromise of the blood flow and mesenteric thrombosis.

CONCLUSIONS

1. There is no substitute for early operation when the lumen of the bowel is completely occluded. All other treatment, though very necessary, must be considered supportive and not curative.

2. Certain types of inflammatory or adhesive obstruction may be permanently relieved by proper treatment without operation.

3. Supportive treatment by administration of sodium chloride solution and methods of stomach and intestinal decompression are indicated as preoperative therapy to improve the operative risk in all cases showing the effects of dehydration and hypochloremia. Prolonging such treatment beyond a few hours is unnecessary and might prove fatal, especially in cases with strangulation of the bowel.

4. Extensive operations upon an acutely obstructed bowel are hazardous except in the early cases. The briefest operation with the least possible trauma is the procedure of choice. It is safer to follow the collapsed bowel upward to an obstruction than to eviscerate and follow a distended bowel downward to the point of obstruction.

BIBLIOGRAPHY

1. Wangensteen, O. H.: Therapeutic Consideration of the Management of Acute Intestinal Obstruction. Arch. Surg. 26: 933, 1933.
2. Maddock, W. G., and Coller, F. A.: Water Balance in Surgery. J.A.M.A. 108: 1, 1937.
3. Haden, R. L., and Orr, T. G.: Chemical Changes in the Blood of Man after Acute Intestinal Obstruction. Surg. Gynec. and Obstet. 37: 465, October 1923.
4. Jones, C. M., and Eaton, F. B.: Postoperative Nutritional Edema. Arch. Surg. 27: 159, 1933.
5. Curphey, W. C., and Orr, T. G.: Edema in Surgical Patients. Surgery, 1: 589, 1937.
6. Bartlett, R. M., Bingham, D. L. C., Pederson, S., Maddack, W. G., and Coller, F. A.: The Replacement of Sodium Chloride in Surgical Patients. Trans. Amer. Surg. Assoc. 56: 305, 1938.
7. McNealy, R. W., and Willems, J. C.: Absorption of Dextrose From Colon; Study of Effects of Chemical Excitants and of Stimulants on Dextrose Enema. Arch. Surg. 22: 649, 1931.
8. Rumold, M. J.: Experimental Pulmonary Embolism Associated with Venocylsis. Arch. Surg. 30: 685, 1935.
9. Orr, T. G.: Use and Abuse of Intravenous Therapy in Surgery. J. Missouri State Med. Asso. 34: 219, July, 1937.
10. Abbot, W. O., and Johnston, C. G.: Intubation Studies of the Human Small Intestine. Surg. Gynec. and Obstet. 66: 691, April, 1938.
11. Carlson, H. E., and Orr, T. G.: Effect of Enemas on Intestinal Motility. Arch. Surg. 30: 881, 1935.
12. Plant, O. H., and Miller, G. H.: Effect of Morphine and Other Opium Alkaloids on Muscular Activity of Alimentary Canal. J. Pharmacol. and Exper. Therap. 27:361, 1926.
13. Orr, T. G., and Carlson, H. E.: The Effects of Morphine on the Movements of the Small Intestine and Sphincter Muscles. Arch. Surg. 27: 296, 1933.
14. Ochsner, A.: Acute Intestinal Obstruction. Surg. Gynec. & Obst. 52: 702, 1931.
15. Gordon, E. J.: The Treatment of Postoperative Abdominal Distention with Prostigmin. Surgery 7: 686, May, 1940.
16. Carlson, H. E., and Orr, T. G.: Penetration of Moist Heat applied to the Abdomen and its Effect on Intestinal Movements. Arch. Surg. 30: 1036, June, 1935.
17. Fine, J., Sear, J. B., and Bank, B. M.: The Effect of Oxygen Inhalation on Gaseous Distention of the Stomach and the Small Intestine. Am. J. Digest. Dis. and Nutrition 2: 361, 1935.
18. Thalhimer, W.: When Is Oxygen Therapy Indicated and How Is It Best Given? Mod. Hosp. 38: 105, 1932.
19. Wangensteen, O. H.: The Therapeutic Problem in Bowel Obstructions. Springfield, C. C. Thomas, 1937.

THE GOITER PATIENT

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Disturbances of the thyroid gland are divided into: (1) developmental, (2) metabolic, (3) proliferative, (4) degenerative and their combinations. At this time the last two and their combinations are the only ones of interest in the discussion of the goiter patient. Diseases of the thyroid gland are so complex and interwoven that a definite set classification as to type is impossible. Classification can only be based on what pathological anatomical change is present at the time the diagnosis is made.

An individual at adolescence will have a simple colloid goiter, at age thirty it may be a non-toxic nodular goiter, at age forty a toxic nodular goiter, or it may have escaped these last two stages and may have become an acute toxic goiter with eye signs. Proliferative changes in the acinal and extra-acinal cells is the earliest and most definite pathological finding of a diseased gland, as hyperplasia always means hyperfunction unless there is also an associated degenerative process. Degeneration in a gland must be looked at in the light of how much is senile degeneration and how much is a pathological terminal stage. The difficulty has always been and still is to correlate the clinical and pathological findings and diagnose a certain type of goiter and recommend a certain type of treatment.

The acute thyroid with its definite hyperplastic and clinical findings which are called Grave's disease, is the most easily diagnosed and understood. However, even this at a later date will show degenerative changes and signs of myxedema. The chronic thyroid which is a progressive disease from one stage to another, will show both recent changes and evidences of disease of bygone years. A Grave's disease established on an old colloid goiter may in areas show just a simple or nodular colloid goiter with proliferative changes in other areas.

Whether all goiters start in adolescence is not definitely known but evidence points very strongly in this direction. Also, the exact effect of iodine is not known, but we do know that it has a very desirable action of regression upon the adolescent goiter, while very little if any action on the adult goiter. The reason for this is evident, the adolescent goiter is due to an accumulation of colloid in the acini which is a disturbance of physiological function while the goiter after the age of twenty-one begins to show hyperplasia from which there is no restorative process. Thus, we see that goiter is not a disease, but various stages of a disease which changes with the elements of time and age.

However, it is necessary for discussion and clarity to attempt a classification and to describe what is meant and included in that classification. The following classification has proved as practical as any

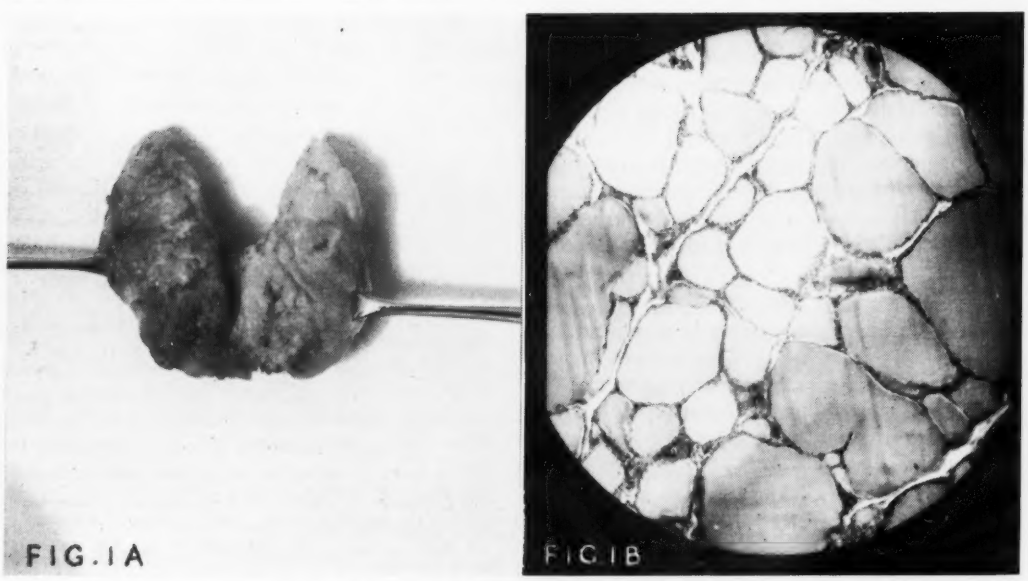


FIG. I. NON-TOXIC DIFFUSE GOITER.

A. Gross pathology shows smooth, uniform, pale elastic goiter. B. Microscopic pathology. Flat, low cuboidal epithelium, normal variations in size of acini, pink uniform colloid.

and will be used throughout the remainder of the discussion:

1. Non-toxic diffuse, simple adolescent colloid goiter.
2. Non-toxic nodular (nodular colloid goiter).
3. Toxic nodular goiter.
4. Toxic diffuse (Grave's disease).
5. Foetal adenoma.

The first three of these represent degeneration and when toxicity manifests itself it is due to a degeneration and produces a cardio-toxic stage. The toxic diffuse goiter is a wholly different picture. It presents a picture of proliferative hyperplasia and its toxicity is due to excessive gland activity and secretion.

Foetal adenomas are not really goiters at all but are tumors of the thyroid gland, but due to the often abuse of foetal adenomas being called goiters, I have included them in the discussion as they are often implanted in a colloid or nodular goiter and the patient becomes toxic from a degenerative process.

The non-toxic diffuse goiter or simple colloid goiter is as the name implies, a diffuse, smooth, movable, bilateral goiter produced by an overabundance of colloid in the acini due to a functional imbalance of disturbed metabolism and not due to a hyperplasia or hypertrophy. When hyperplasia occurs, which is usually not until the patient is past twenty-one years old, the goiter then becomes a nodular type which may or may not become toxic but according to Hertzler, always produces a cardio-toxic heart years later. This is the only type of goiter in which complete recovery is possible without surgery as here cellular proliferation has not taken place. The normal course of this type of goiter is regression at puberty with a rebalance of the entire endocrine system to normal. In girls there is often an associated dysmenorrhea and irregular menses.

The non-toxic nodular is as its name implies a goiter of the diffuse type which has become nodular to such an extent that the clinician can feel the bosselations and firmness of the gland. When the gland reaches this stage it is past all possibilities of receding, as hyperplasia has taken place in the acini. The epithelium of the new acini are flat and non-toxic as expressed clinically by a normal basal metabolism.

The toxic nodular goiter is a further step in the preceding goiter type which has become characterized by a degeneration of the acinal hyperplasia which results in a toxicity evidenced pathologically by basophilic staining colloid and degeneration of the acinal cells. The question is what produces the toxicity, Hertzler believes it is due to the histochemistry of the colloid and manifests itself clinically by cardiac degeneration and fatigability. This goiter, therefore, is the product of aging on a simple diffuse colloid goiter. Occasionally this picture of slow toxicity may be complicated with a sudden onset of toxicity evidenced by eye signs, rapid pulse, rapid loss of weight and rapid termination of cardiac degeneration and death.

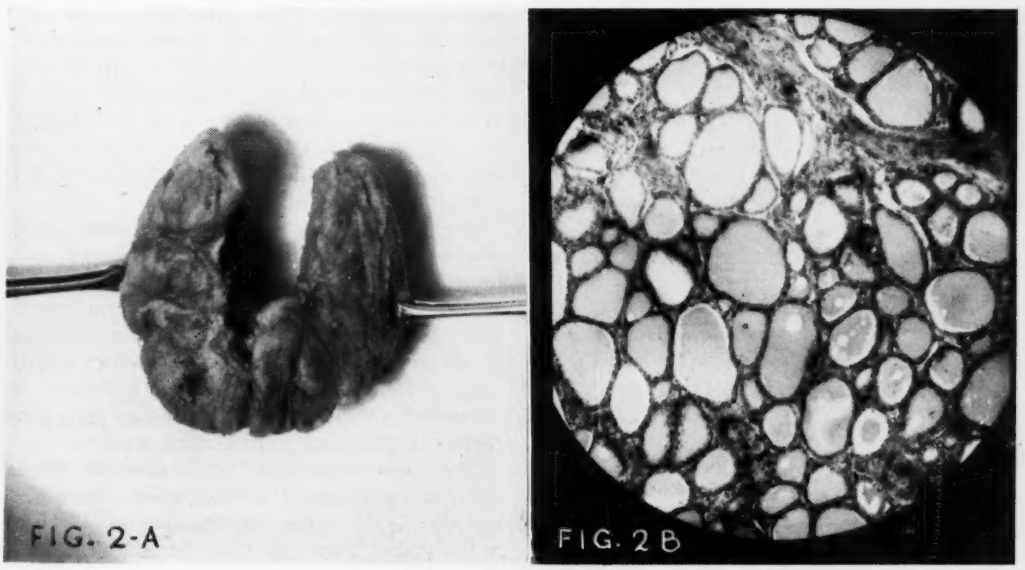


FIG. II. NON-TOXIC NODULAR GOITER.

A. Gross pathology shows a bossilated, firm, translucent gland.

B. Microscopically shows new acini between old acini, dilation and cystic degeneration, compression, increase in fibrous tissue septa.

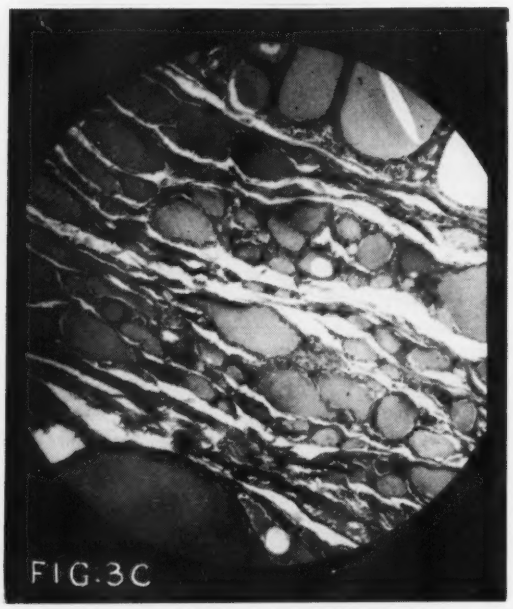


FIG. III. TOXIC NODULAR GOITER

A. Gross pathology shows more firm gland, red in color, fibrous tissue increase, hemorrhagic and cystic areas, degenerated lobules, and occasional calcified areas.

B. Cross section of gland showing lobulations and fibrous tissue increase.

C. Microscopically there is degeneration of colloid, atrophy of epithelium, increase in fibrous tissue, areas of hemorrhage and necrosis.

The diffuse toxic goiter or exophthalmic goiter or Grave's disease, is a purely hyperplastic toxic, smooth goiter due to hypersecretion and not preceded by a simple colloid goiter, but arising early in life as a rule and from a normal thyroid gland. However, some difference of opinion exists as to whether this type may not arise from an early simple diffuse type of goiter which has not shown much increase in colloid. Pathologically, this gland is diffuse, smooth, firm and characterized by hyperplasia of the acinal cells and acidophilic colloid. Where eye signs are present, papillation will always be found with a piling up of cuboidal and columnar type acinal cells, often filling the entire acini. This type of goiter may undergo periods of remission and exacerbation of symptoms.

Hertzler gives another type of goiter or stage which he calls the cardio-toxic goiter, which is described as the end stage of the toxic nodular colloid goiter and the acute toxic goiters; characterized by degeneration of the gland and cardiac decompensation with pathological evidence of its presence in cardiac degeneration and not in the pathology of the gland itself. Thus, Hertzler places all goiter heart cases under this classification with the normal end result in cardiac death.

The pathology of the non-toxic diffuse goiter consists, grossly of a gland which is smooth, uniform in contour and consistency, pale and on cross section presents a picture similar to a normal gland with fibrous sept dividing it. The large acini are visible to the naked eye and are filled with a clear colloid. Microscopically, the acinal epithelium is flat or low cuboidal forming various sized acini containing an abundance of pink staining colloid.

The symptoms produced by the non-toxic diffuse goiter are not marked in their onset, usually the size alone is the earliest manifestation noted. Then, as the patient enters her teens she may show nervous, neurotic tendencies with a dysmenorrhea which may persist for years, without any change in the gland itself. Iodine and sedative medication in

these early types usually tends to regression of the goiter and symptoms, however, those that continue to enlarge become surgical as they merge into the exophthalmic types or into the bosselated type from which regression is not possible. We have all seen the long asthenic patient complaining of everything under the sun, with a small smooth goiter; he or she goes from one doctor to another for relief, these types apparently do not respond to medication nor surgery and it is a surgical mistake to operate these cases as they will haunt your office thereafter wanting to know why they are not completely well. I always like to classify this type as an interstitial type of goiter, feeling that although it is smooth, uniform and small it derives a certain amount of metabolic disturbance from an interstitial change of hyperplasia of interstitial cells.

The pathology of the non-toxic nodular goiter consists clinically of a palpable, movable, firm, elastic, bosselated gland. The nodulations will be present pathologically on removal of the goiter, while not palpable clinically. These bosselations are produced by hyperplasia and as stated before this process usually takes place in all smooth goiters by the time the patient reaches the age of twenty-five years. The pathogenesis of this type of goiter is believed to be gradually progressive from a simple diffuse non-toxic to a nodular non-toxic and finally to a nodular toxic state. However, even in this stage of so-called non-toxicity, the patient complains of nervousness and we find her pulse elevated but we usually disregard this and pay no attention to the goiter only fifteen years later to see this patient return with definite toxicity present of a degenerative nature. Therefore, can we ever say a nodular goiter is non-toxic, I believe yes in so far as just at the time clinically examined, but no in so far as we consider its hidden pathology and pathogenesis. If hyperplasia of the acini develops, then we have an acute toxic goiter. Clinically this type is often seen as a large protruding goiter, however, toxicity cannot be gauged by size as the large lobulations are often cystic and present an atrophic structure. It is in this type however, that acute hemorrhages sometimes occur with sudden choking spells and rapid increase in size of the neck, which necessitates immediate surgery.

The cross section view of a nodular goiter depends again on its age, the older it becomes it looses its translucent nature and becomes more reddish in color due to increase in hyperplasia of cell structure. The fibrous tissue septa are firm and increased in amount giving the gland an appearance of being divided into lobes. The acini may be large and visible to the naked eye and even cystic or if hyperplasia is more pronounced the acini may be hard to see and the structure correspondingly more firm.

The microscopic picture in the nodular non-toxic is characterized by the beginning of the formation of new acini between old ones or in the walls of old ones with dilation and cystic degeneration and

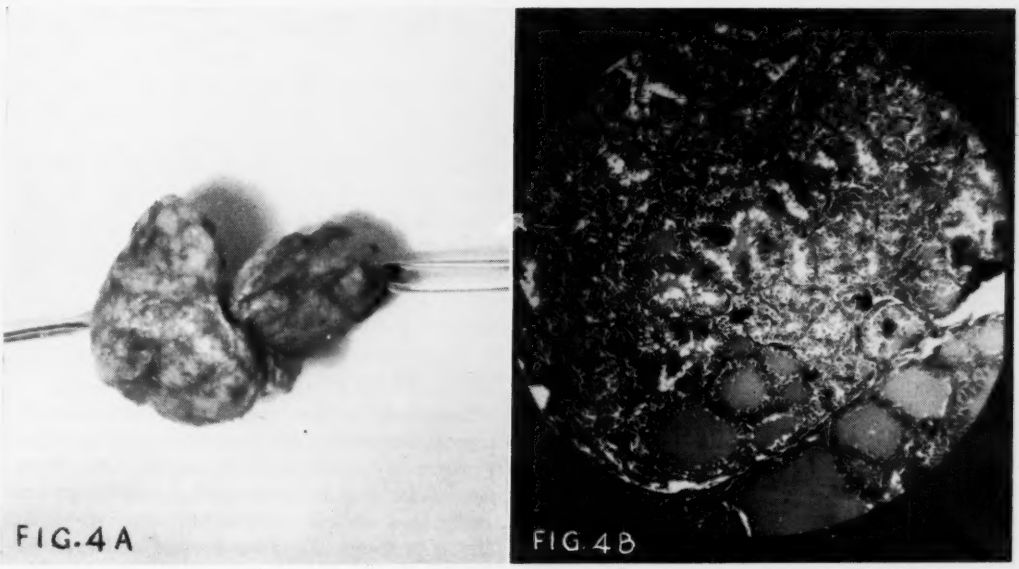
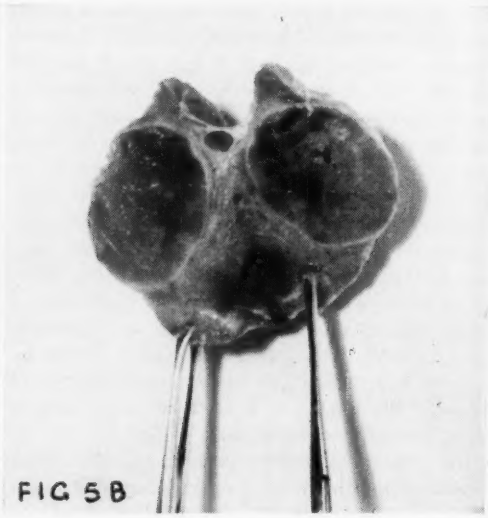


FIG. IV. TOXIC DIFFUSE GOITER.

A. Gross pathology presents a hard gland with edematous capsule, gland is friable, bleeds freely on removal.

B. Microscopic pathology showing papillary hyperplasia, crenated colloid, cellular hypertrophy and hyperplasa, formation of new acini.



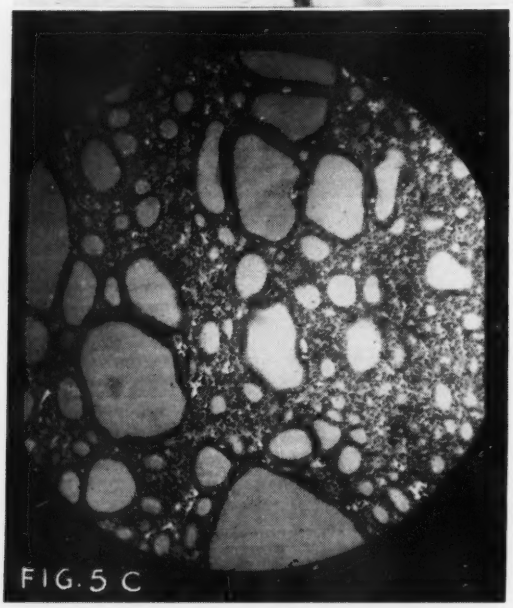


FIG. V. FOETAL ADENOMA

A. Grossly presents a round encapsulated tumor protruding from normal gland tissue.
B. Cross section showing definite thick capsule with hemorrhagic cystic area in center of adenoma nodule.
C. Microscopically typical foetal type acini without colloid or lumen.

often compression of old acini resulting in nodulation. Degeneration of colloid is noted by it taking a more blue stain over the eosin stain of the new formed acini. Cellular activity in the non-toxic state is not evident as it is in the later toxic state.

The toxic nodular goiter as previously stated is the simple nodular goiter, which is undergoing degeneration resulting in cardiac disturbances, which may or may not be recognized until the cardiac disturbance appears. This condition is the most common type of toxic thyroid seen and is an entirely different pathological goiter from the acute toxic goiter which is characterized by hyperplasia and clinically by thyrotoxicosis as opposed to a degenerative cardiac disturbance in the nodular toxic goiter. However, an acute exophthalmic goiter may be super-imposed upon a degenerative toxic goiter. Pathologically the toxic nodular goiter is firmer to palpation than the non-toxic, is more fixed in the neck tissue and somewhat tender to manipulation. On removal the capsule is more or less adherent to the surrounding structures, the blood vessels are larger and the gland has a definite increase in red color over the more translucent non-toxic goiter. On cross section the nodulations are very distinct with marked fibrous tissue septa, hemorrhagic and cystic areas are very common and occasionally in the aged, calcified areas are found. Histologically the first evidence of toxicity in the nodular goiter is degeneration of the colloid evidenced by the colloid appearing granular, vacuolated and staining with basic dye; this all occurring in the absence of cell hyperplasia, in fact there is marked cell atrophy and degeneration.

Treatment for this type of goiter is universally surgical, treatment result depending upon the degree of cardiac involvement. In the early stages of cardiac involvement the removal of the cardiac irritant results in a complete satisfactory cure. However, later as permanent heart involvement and degeneration has occurred the removal of the goiter only stops further toxicity but the cardiac damage is permanent and will progress to a final cardiac death

even if there is no more toxic reaction from the thyroid. It is believed by some, that the nodular toxic goiter should be totally removed as the portion left in the usual subtotal thyroidectomies is enough often times to complete a cardiotoxic state and end years later in a cardiac death, although clinically the patient has been relieved of his goiter.

The acute diffuse toxic goiter is to be definitely defined from the chronic toxic or nodular toxic goiter; as likewise is the term exophthalmic goiter and Basedow's disease which are synonymous and refer to the acute diffuse toxic type; while the term Grave's disease includes the chronic nodular which have suddenly become toxic, thus having a secondary super-imposed acute toxic state. This type, the secondary acute toxic usually occurs in older individuals as it springs from an old nodular goiter base. Therefore, the acute toxic diffuse goiter refers to those goiters which have arisen rapidly in the younger individual from either a pre-existing simple colloid goiter or even a normal thyroid gland due to hyperplasia of the epithelial cells due to some unknown factor which results grossly in a diffuse bilateral, smooth, firm, slightly tender goiter producing toxic symptoms of nervousness, palpitation, tachycardia, loss of weight, tremor and in ten per cent of the individuals, exophthalmos. The secondary toxic type is less typical in clinical symptoms and likewise more damaging as it occurs in the older individual whose heart has already been damaged by a chronic nodular goiter. The acute toxic goiter produces tachycardia even to tremendous degrees but rarely results in heart failure; those resulting in heart failure are usually only those who have had trouble over a period of years, who have gone through one or two attacks with "burning out" of the toxicity. Likewise it is interesting to note, that a single lobectomy will produce a great improvement in the patient and even an apparent cure for even two to three years. When at that time the second lobe is removed and examined microscopically it will present the same hyperplasia as the first lobe. Therefore one is prone to wonder, the improvement must have been in the chemistry of the colloid and not in the cellular hyperplasia. When regression does occur spontaneously it is evidenced microscopically by a degeneration of the colloid and years later the patient dies a cardio-toxic death, the same as produced by a chronic nodular goiter with degenerative changes. Therefore one is led to feel that the cardio-toxic state is brought about by the product of degeneration alone and the hyperplasia only results in cardiac stimulation.

If papillation is present there are eye signs, also the converse is true. These eye signs may be slow to develop but are true to type and manner of onset. As a rule the fixed gaze is first noticed, then the widening of the palpebral fissure and delayed winking and finally definite exophthalmos. Regression of eye signs is rapid in those operated early. Those not operated but allowed to "burn out" will retain the eye signs though other signs of toxicity clinically have disappeared.

The gross pathology of the toxic diffuse goiter is that usually of a small or medium sized goiter as it develops rapidly and toxicity manifests itself before extreme enlargement has taken place. The gland is therefore usually smooth or granular on the surface with a diffuse bilateral enlargement. Due to the hyperplasia present, the gland is firm to pressure. On cross section the colloid follicles are small, the gland appears very cellular and firm. Whitish areas and dots of firm hyperplasia of acinal epithelium are plainly visible to the naked eye. Cystic degeneration, hemorrhage and nodulation are only present in old burned out glands or in the old toxic nodulars on which a secondary acute toxic process has been super-imposed. Therefore the picture varies in the young individual from a nearly normal colloid goiter which has become more firm and in which are only a few firm, white cellular areas of hyperplasia to glands in the older individual which have only localized areas of hyperplasia.

The histological picture of the acute toxic goiter is very typical and here two definite groups are present. First those glands in which papillation of epithelial cells into the lumen of the acini is present and second, those glands in which papillation is not present. In the first, it can be said that exophthalmos is present in the patient and in the second that exophthalmos is not present. In other words exophthalmos is always associated with the microscopic findings of papillation of acinal epithelium. The next feature looked for and found in the acute toxic goiter slide is the change in the colloid which is evidenced by granulation, vacuolation and basophilic staining of the colloid. It must always be kept in mind that the usual acute toxic goiter has started from a nearly normal gland and that there will be microscopic areas of nearly normal thyroid gland present so the microscopic study must be from several areas throughout the gland and not from only one localized area or the true picture with papillary formation, colloid change, etc., may be missed. The third characteristic feature of the acute toxic goiter is the formation of new acini which are usually small and free of colloid. If the toxicity is severe there will be even solid masses of cells with deep staining nuclei and pale protoplasm. Round cell infiltration and areas of hemorrhage denote severe toxicity. Acinal epithelium is hypertrophied as well as hyperplastic. In severe toxic cases the acinal epithelium

may show degeneration and even exfoliation, this as a rule noting that an abrupt end for the patient is likely.

The treatment and prognosis of this group of goiters is perhaps one of the most particular, from pre-operative and operative care, of any surgery done and also one of the most dramatic in results to the patient and satisfaction to the surgeon. Proper pre-operative care with rest, sedatives and Lugol's solution will not only place the patient ready for surgery but also make a very difficult piece of surgery a fairly easy one, attended with little risk if cardiac damage has not already been produced. The patient's symptoms will subside with proper pre-operative care but haste here should be stayed as the goiter itself may not be ready. In fact, the gland should not be considered ready until the connective tissue reaction of its capsule has subsided and it becomes more freely movable from the surrounding neck structures. If operated too early, bleeding will be profuse from the many friable capsular vessels and the surgical capsular dissection will be difficult. Friability of the connective tissue and also the gland itself is greatly lessened with a long enough pre-operative medication with Lugol's solution. In fact, the prognosis and mortality rate is more closely governed by the surgical judgment of when to operate than any other single factor. The amount of gland to be removed should be governed by clinical experience and not by any hard and fast rule; but I believe as time goes on we are becoming more prone to remove more and more gland, as the part that is left is also diseased. It is questionable as to how much normal function the remaining tissue carries on. The possible production of myxedema does occur once in awhile but its satisfactory treatment with thyroid extract even over a period of years still leave a very grateful patient for the removal of her goiter. According to Hertzler, it is doubtful if the myxedema is due to the removal of too much gland; he would rather feel that it is a coexistent state of a hypo and hyper state and that the hypo state was present in a mild state prior to surgery. In other words surgery did not produce the myxedema, as it is a disease of the thyroid gland and not a lack produced by surgery. Be this as it may, we do know that iodine and thyroid extract relieve the symptoms of myxedema and often spontaneous cure results.

The foetal adenoma should not really be considered a goiter as it is a tumor pure and simple of congenital origin. It may arise from an otherwise normal gland or from a colloid goiter with which it has no connecting relationship. As the foetal adenoma enlarges it produces pressure symptoms and even degenerates similar to the toxic nodular producing cardio-toxic states. Malignant change is frequent enough that all foetal adenomas should be removed as a prophylactic if for no other reason. The toxicity of the foetal adenoma is slow in onset much more so than that from the toxic nodular goiters and not so severe, yet it will as surely result in a cardio-toxic state if not removed. The toxic symptoms are progressive and not subject to remissions and relapses. Exophthalmos as a secondary acute toxic state never occurs in a foetal adenoma, in other words papillation never occurs; if exophthalmos is present it is due to papillation outside of the foetal adenoma in the remaining thyroid structure.

The gross pathology of the foetal adenoma is quite characteristic and should never be confused with a nodular goiter, as it is a round, discrete tumor usually protruding from the rest of the gland. The capsule is very heavy and firm, so much so that the adenoma may be shelled out from the rest of the gland. On cross section, the fibrous capsule is as a shell about the gland structure which is made up of very small acini with very little colloid. The earliest secondary change is the production of a fibrous tissue core of stellate shape. Heavy walled cystic areas are frequent degenerative changes as well as areas of hemorrhage. Eighty per cent of all thyroid malignancy arise from foetal adenomas; so for this reason alone all foetal adenomas should be removed.

Histologically, the foetal adenoma presents a typical picture of very small immature acini containing little if any colloid, in areas the cells will have grown in columns without any semblance to acini formation. Next the capsule is very important as differentiation from the capsule of the nodular goiters which is made up of compressed acini and fibrous tissue. The capsule of the foetal adenoma does not contain compressed acini of normal or degenerated thyroid tissue but is a purely fibrous tissue structure of a thick firm growth.

The foetal adenoma may become microscopically malignant with lawless growth of cells all remaining intra-capsular and clinically benign, for a period of time before it finds its way through the capsule and becomes a definite malignancy. Histologic findings of hemorrhage, desquamation and liquefaction is often present in one area while other areas may show normal foetal adenoma structure and yet others a tendency to columnar formation and even malignant change.

SUMMARY

1. The classification of colloid goiters is only relative in that it notes only the stage of the pathological process present at the time of examination.

2. The type of goiter present in the colloid family depends upon the age of the goiter.

3. Toxicity produced in the nodular goiter is a degenerative end stage always resulting in a cardiotoxic state.

4. The simple colloid goiter is the only type that will under-go remission and this before the age of twenty-five.

5. All colloid goiters after the age of twenty-five become nodular and progressive.

6. The acute toxic goiters arise rapidly from an apparently normal gland and are characterized by hyperplasia with increased secretion of the gland with resulting toxicity.

7. Removal of acute toxic goiters gives gratifying results both to patient and surgeon.

8. Foetal adenomas are in reality tumors arising from foetal rest cells and are only of importance from secondary degeneration, or excessive size or a terminal malignant change.

BIBLIOGRAPHY

Curtis and Delany. Arch. Path., October, 1930, 10, 580-586.
Curtis. Surg. Clin. N. Am., February, 1932, 197-203.
Davison. South. Surg., June, 1934, 3, 103-111.
Helwig, F. Surg., Gynec. & Obst., August, 1928, 47.
Helwig, F. Surg., Gynec. & Obst., July, 1932, 35-44.
Hertzler, A. E. Surgical Pathology of the Thyroid Gland 1936.
Hertzler, A. E. Arch. Surg., June, 1928, 16, 1187-1200.
Mason and Warren. Am. J. Path., July, 1931, 7, 415-422.

A METHOD TO DETERMINE PACKED WHITE CELL VOLUME OF BLOOD

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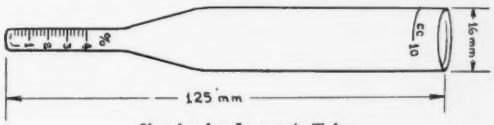
Centuries ago, it was known that if clotted blood were allowed to stand for several hours, a thin white layer formed over the surface of the clot. This layer, the "Crusta Inflammatoria," was usually more obvious in the blood of diseased individuals and therefore was considered harmful. Patients were subjected to "blood letting" to remove some of this supposedly harmful substance, which we now know to be a layer of white blood cells. A count of the number of white cells per unit volume of blood has long been a routine blood test, however, the author has not found in the literature a description of an accurate technic for measuring the per cent volume of packed white cells.

The percentage of packed white cell volume may be determined by measuring the buffy coat either in a tube of centrifuged blood, or in a tube of rapidly sedimenting blood that has stood for several hours, but inasmuch as many of the leucocytes will be dispersed throughout the red cells, these methods will be found only approximate — too inaccurate to be practical.

A white blood cell count is carried out by making a one in twenty dilution of blood in a one per cent acetic acid solution; this hemolyzes the red cells and dilutes the concentration of white cells. The white cells then may be counted in a chamber of known volume, and the number of cells per unit volume of blood may thereby be computed. We have found it possible to centrifuge the diluted hemolized blood in a special small-tipped centrifuge tube; the cells are thrown down into the narrow calibrated tip, and



Sketch of a Leucocrit Tube.

the per cent volume of leucocytes in the blood thus is easily determined. To the packed white cell volume we have given the name "Leucocrit." The leucocrit tube* is of glass one mm. in thickness; it is 125 mm. in length, the inside diameter is fourteen mm. in the large upper part and 1.25 mm. in the calibrated tip.

The technic of the test is as follows: Five cubic centimeters of blood, secured by venapuncture, are injected directly into a four ounce medicine bottle containing ninety-five c.c. of three-eights per cent acetic acid and shaken a few times. Ten cubic centimeters of the mixture are placed into each of two leucocrit tubes and are centrifuged at about 1750 rpm. for five minutes. The volume of white cells packed at the calibrated stem of the tube then is read off as the percentage of leucocyte volume of whole blood. The reading is facilitated by holding the tube against a background of any good light source such as a window or an electric light, an eye-piece is not necessary.

Any amount of blood may be used provided the ratio of blood to acid remains the same. We use five cubic centimeters of blood because we find it rather inaccurate to measure smaller quantities directly from the syringe. One cubic centimeter of blood may be used, if desired, in which case the one cubic centimeter of blood drawn into a one or two cubic centimeter syringe is injected into nineteen c.c. of the acid solution. We choose to use more blood and solution in order to allow for some waste and spill and for a recheck if necessary. We find that the ease of handling compensates for the few extra cubic centimeter of blood loss and the extra amount of hemolyzing solution, which costs only six cents a gallon. Whether giving intravenous

*Steinlite Laboratories, Atchison, Kansas.

medication, or drawing venous blood for other blood tests, one may conveniently withdraw an additional five cubic centimeters for the leucocrit.

One-half cubic centimeter of blood content is present in the ten cubic centimeters of mixture in the centrifuge tube. Therefore each .005 c.c. of white cells in the bottom of the tube represents one per cent of the blood volume and is so indicated on the tube. Each one per cent is subdivided five times by short transverse lines which indicate .2 per cent of the whole blood volume.

After centrifuging, there may be a very small amount of a brown transparent cloudy layer just above the packed white cells. This is caused by incomplete stromolysis of some of the erythrocytes. This layer will be more prominent if centrifuging is prolonged; however, it does not interfere with the reading and may be disregarded.

The three-eights per cent acetic acid solution hemolyzes the erythrocytes and helps to prevent clotting. Stronger acid cause the solution and the leucocytes to assume a deep brown color.

The degree of centrifuging necessary will vary with the individual centrifuge machine. Two criteria of completeness of centrifuging are; the absence of white cells in the fluid upon microscopic examination, and no increase in the leucocrit upon further centrifuging.

We avoid the use of anticoagulants because they retard stromolysis; citrate, oxalate, heparin, and liquoid have been tried. The latter two have proved fairly satisfactory, but with certain blood samples they also retard stromolysis, to a slight extent, and thereby interfere with the test.

Clean glass-ware is imperative throughout. Our cleaning instrument for flushing the narrow tips of the centrifuge tubes is a spinal needle on a two cubic centimeter syringe.

The chief value of the test lies in its simplicity and in the fact that it avoids the possible sources of error of microscopic technic, especially in the hands of the untrained. The difference in size of the various types of white cells (six to twenty microns in diameter) makes it difficult to check accurately a white cell count by the leucocrit. Corresponding numbers of monocytes and small lymphocytes would occupy dissimilar volumes. The leucocrit serves as a check on both the white cell count and the differential white cell count when considered together. It might well be used for every complete hematological workup, serving to verify and enhance, but not to replace, the white cell count and the differential count. As is true of almost any new laboratory test, several trials may be required before the technic is satisfactorily mastered. The procedure will then require but little time, yet give dependable results.

In our series of 100 cases we have found the normal packed white cell volume to range from one-half to one per cent. One individual with a 7,200 white blood cell count and a .8 per cent leucocrit showed during an attack of acute appendicitis a white blood cell count of 19,500 and a leucocrit of four per cent. The greater relative increase in the leucocrit being due to the leucocytosis and to the relative increase in neutrophils which are large cells. On the other hand chronic inflammatory processes with normal white blood cell count but a large number of small lymphocytes give low leucocrit readings.

SUMMARY

We present a technic to ascertain the percentage of white cell volume in blood by centrifuging hemolyzed blood. It is not within the scope of this preliminary paper to describe the white cell volume changes found in pathological bloods.

TUMORS OF PLEURA AND PERITONEUM ANATAMO-HISTOLOGICAL STUDY*

SUMMARY

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The tumors of the pleura and peritoneum have given rise to numerous studies and theories, many of them conflicting with each other. In this paper have been reported three cases of pleural and two cases of peritoneal tumors, the histological study of which has been carried out.

Case I—This man was injured in an automobile accident and received a fracture of two ribs. He was admitted to the hospital and at that time the x-rays revealed nothing beside the fracture of the ribs in the left side. A few days later pain and fluid in the chest developed. For several months the fluid continued to form and was aspirated several times. The patient went gradually downhill and the last pleural puncture aspirated only a small amount of blood. He died about seven months from the time of the fracture.

Anatamo-Histological diagnosis: Mesothelioma of the pleura.

Case II—A man of about fifty years of age had received an injury to his left side three years pre-

*For detailed paper order Document 1443 from American Documentation Institute, Offices of Science Service, 2101 Constitution Avenue, Washington, D. C., remitting thirty-five cents for microfilm or $2.60 for photocopies readable without optical aid.

**Pathologist, State Hospital, Topeka.

viously. Several times fluid was extracted from the left pleural cavity, as well as new fluid was constantly present. He was received in a tubercular sanitarium, with the diagnosis of tuberculous effusion. Bacilli were never found in his sputum and inoculation of the fluid into guinea pigs was negative.

Anatamo-histological diagnosis: Mesothelioma of pleura.

Case III—A woman fifty-five years of age had been sick for the last year or so. No physical findings, except loss of weight and weakness. The pulmonary findings had never been pronounced enough to attract the attention of her physician. She died without a definite diagnosis being made.

Anatamo-histological diagnosis: Mesothelioma of the pleura.

Case IV—A man about sixty-two years of age had been losing weight and having vague gastro-intestinal disturbances and enlargement of the abdomen. Finally he showed signs of obstruction and decided to call a physician. The marked degree of undernourishment was considered a contra-indication to any surgical intervention, inasmuch as a probable carcinoma of the gastro-intestinal tract was suspected. The patient died in the hospital a few days after admission The peritoneal surface was studded with numerous pinpoint white dots, having the appearance of tubercles.

Anatamo-histological diagnosis: Mesothelioma of the peritoneum.

Case V—A woman seventy-one years of age consulted a physician because of an enlarged mass in the upper abdominal cavity. She had no great discomfort from the mass. An exploratory operation was performed. At the operation a large mass was found in the retroperitoneal cavity, immediately below the inferior margin of the pancreas. The mass was fluctuant and in the manouver of isolation, ruptured, giving exit to a large amount of bloody fluid and to a soft grayish or hemorrhagic matter, of the consistency of brain tissue. The wall was thick and infiltrated with blood. The tumor was not removed, due to the difficulties of isolation and the advanced age of the patient.

Anatamo-histological diagnosis: Mesothelioma of peritoneum, showing angio-plastic orientation.

COMMENT

The most important work on the development and physiology of the mesothelium is certainly Maximow's contribution. He admitted that the lining elements of the pleura may assume the character of fibroblasts, by modifying their form, without losing, however, their mesothelial character. Schopper, instead, claimed that the serosa lining cells assume sooner a mesenchymal character and are transferred into true fibroblasts.

The extensive literature and theories on the subject are reviewed.

The conception of Fischer-Wasels and Marras of undifferentiated carcinomas of the serosas would seem to be logical, if it were not inspired to the theory of heterotopias and embryonal germs. Although we always speak about a point of origin, truly we do not admit that a neoplasm originates from the proliferation of adult elements. Every pathologist agrees that such a multiplication or proliferation of adult elements would lead to hyperplasia and that even in such a case, adult elements have little or no mitotic activity. In a work on metaplasia of the cells, Bencini showed that in order to differentiate in some other direction the cells should dedifferentiate. However, where such pictures of dedifferentiation are not very common, the new trend of differentiation comes from undifferentiated elements with evolutive capacities, the so-called cambial cells. In any tissue, which undergoes metaplastic, cataplastic or neoplastic changes, such changes are never present in the adult elements, which have already reached a degree of maturity, but are present in the cambial cells of the same tissue. In such an order of ideas, the conception of Fischer-Wasels is true, because no neoplastic process may come from cells which have or are reaching a certain degree of differentiation but only from cells which are completely undifferentiated. While this is true, and almost accepted by the majority of authors, in discussing the histogenesis of these tumors, we have in mind the natural evolution of the cambial cells present in an organ, where the tumor develops. In speaking of tumors derived from a tissue, we have in mind that the cells in that organ normally have only one evolutive capacity in the direction of the functioning adult cell. To make a comparison, we can compare these cells to gametocyte, which have only one possibility, that is to develop into the adult individual.

There is no tumor, if there is no activity of the tissue and reproduction of new cells. Tumors originate from those elements, which have the predominant physiological role in an organ. In my opinion this is the reason, without completely denying the possibility of connectival tumors in epithelial organs, the epithelial tumors are those more often encountered. It is possible that connectival tumors in epithelial organs are developed only when there is any increase or predominance of granulation tissue, following an infectious or hyperplastic process. In this line of thought, for example, we can explain the rarity of neuroganglioma of the adult brain, because the nervous tissue, although very active, shows no reproductive activities and does not contain any great number of cambial cells, while it may occur more often in children, where the activity and reproduction of cells are at its height.

In the pleura and in the peritoneum, the tumors may be derived from the lining cells, which are the preponderant physiological elements. The lining cells in these locations, have not achieved, however, their highest differentiation, and possibly they have

(Continued on Page 25)

President's Page

To the Members of The Kansas Medical Society:

The medical defense program is working out satisfactorily in Kansas. A high percentage of the medical questionnaires sent to 2060 Kansas physicians has been returned to headquarters properly executed. Examining physicians for local draft boards and members of medical advisory boards are busy culling out those physically unfit for military service. Members of the medical reserve corps are being called to active duty, while others are awaiting orders. As time goes on the defense responsibilities of all doctors of medicine will increase, regardless of our military or civilian status, and our obligation is to hold ourselves in readiness for future service.

The 1941 session of the Kansas Legislature is getting under way. Since February 10, 1859, the members of The Kansas Medical Society have taken more than a passing interest in legislative matters having to do with the health of our people. Legislative enactments are essential in the furtherance of preventive medicine activities, tuberculosis control, medical aspects of workmens compensation laws etc., and as a profession it is our duty to see to it that such enactments are scientifically and economically sound.

The past few years our Society has taken a very active interest in legislative affairs. Our intention is to raise medical standards and never to lower them in Kansas. Our efforts in the past have been definitely committed to this achievement and under no circumstances will we deviate from this policy. If from time to time it becomes necessary to do battle in order to attain this end, the entire membership of our Kansas profession will be found on the firing line for the duration of the war. Fortunately, for the people of Kansas, our legislative bodies are made up of men coming from a hardy stock of Kansas pioneers who have always had the welfare of Kansas people at heart and who don't mind doing battle themselves to preserve Kansas ideals.

Sincerely,

Forrest L. Loveland M.D.

President, The Kansas Medical Society.

EDITORIAL

BLOOD TRANSFUSION DONORS

To surgeons whose routine work includes blood transfusions the welfare of the donors who are used is perhaps given secondary consideration. The procuring of donors is left to the laboratory service in many hospitals. Because of this the responsibility of the surgeons to donors may be forgotten. The result is that donors are often used without a general physical examination. Some donors are used who are beyond the age group best suited for giving blood. Others may have hypertension or other systemic disease which would exclude them if they were carefully scrutinized by examination. The results of using donors who are selected only on the basis of the suitability of their blood is not only unnecessary and unscientific, but it may be exceedingly harmful to the donors.

In a recent article on the "Neuropsychiatric Complications Following Severe Loss of Blood," by Dr. Norman Reider, of Los Angeles, a former member of The Kansas Medical Society, published in the Archives of Neurology and Psychiatry,* this author points out that there are well defined clinical syndromes due to the sudden loss of blood, such as venesection, hemoptysis, hematemesis, urinary and rectal bleeding, gun shot wounds, etc. "The most frequently encountered neurologic sequel is hemiplegia, occurring not only in older persons with arteriosclerosis or hypertension . . . but also in younger persons with no evidence of vascular disease."

There is good reason to include blood transfusion donors among individuals who undergo sudden loss of blood and to remember that they are subject to the neurological manifestations to which Dr. Reider calls attention in his excellent article.

It may be assumed that blood donors constitute a rather healthy group, yet there are deaths reported in the literature following the taking of blood for transfusion. A study of the frequency of accidents, deaths and neurological manifestation occurring in connection with the withdrawal of blood for transfusion should be productive of some valuable data for the consideration of those interested in blood transfusion.

(*Archives of Neurology and Psychiatry November 1940.)

ANOTHER YEAR

Publications which continue thru numerous years are confronted with an interesting problem. If changes in format and arrangement are not frequently made the publication soon finds itself operating in a stereotyped and monotonous manner and with a format which is obsolete and not in keeping with progress. The Journal attempts therefore to make changes in format and style from time to time. The current issue is an illustration. A new arrangement of the cover has been added, the cover stock and interior stock are the heaviest the Journal has ever used and represent in quality one of the best grades of paper which can be purchased. The width of the publication has been slightly decreased for better balance of margins and for complete standardization of size with other medical publications.

Two thousand copies of the Journal were published each month during 1940 and were forwarded to members, subscribers, libraries, exchanges and other sources in every state in the Union and various foreign countries.

The Editorial Board is particularly anxious that the Journal shall include all possible original Kansas material and all other scientific and professional information in which the Kansas profession is interested. It appreciates receiving contributions of scientific articles and it also appreciates receiving information concerning county medical society activities and other information of professional interest. The Journal desires to express its thanks to those members who farwarded contributions during 1940 and to those who will do so in 1941. The efficiency of the Journal is dependent upon the adequacy, the newness and the completeness of the material it publishes. The Editorial Board greatly desires to have your criticism, suggestions and help toward these ends.

EYE, EAR, NOSE & THROAT

THE INTER-RELATIONSHIP OF OPHTHALMOLOGY AND NEURO-PSYCHIATRY*

Lyle S. Powell, M.D.

Lawrence, Kansas

Herschel S. Smith, M.D.

Osawatomie, Kansas

One who works with psychotic patients is immediately impressed by the relatively large amount of eye pathology seen. From this observation one easily deducts that there is a close association between eye disease and mental disorders. In large number of cases the eye pathology is secondary to central nervous system damage, while in a certain number of cases the eye disease is undoubtedly a definite etiological factor in the production of psychoses.

EYE EXAMINATION

Bearing the above facts in mind the following routine eye examination is made on all patients entering the Osawatomie State Hospital, in so far as the patient is able to cooperate with the examiner.

1. Visual acuity—each eye; near and far; accommodation.

2. Fissure—exophthalmos, enophthalmos, ptosis.

3. Lids—movement, defects, masses, swelling.

4. Conjunctiva — inflammations, scars, masses, edema, foreign bodies, secretions.

5. Cornea — inflammations, sensitivity, opacities, malformations.

6. Pupils—size, shape, equality, reactivity to: a. light, b. accommodation, c. pain· d. suggestion.

7. Extrinsic muscles—phorias, trophias, and paralysis.

8. Anterior chamber — depth, foreign bodies in aqueous, tension.

9. Lens—opacities, position.

10. Vitreous—opacities (congenital or acquired).

11. Fundi—(examination done after cycloplegia or mydriasis.) a. Optic disc — shape, size, optic atrophy, optic neuritis, choked disc, cupping, myopic crescent. b. Macula—retinal lesion, color. c. Retina —vascular abnormalities, hemorrhages, exudates· pigmentary deposits, retinal detachment, tumors. d. Vessels—artery-vein ratio, reflexes, tortuosity, notching, differences in calibre.

12. Retinoscopy and refraction under cycloplegia.

13. Refraction without cycloplegia.

14. Visual field examination if indicated—perimeter and Bjerrum screen.

From reviewing the records of 430 patients who were admitted during 1938 and 1939 it was found that only twenty-nine per cent had normal vision and were free from any gross eye pathology. The accompanying table indicates the relative proportion of the types of eye pathology found in these patients.

CLASSIFICATION OF THE PATIENT

The eye examination is a valuable adjunct in making a diagnosis of the mental condition. Syphilis, arteriosclerosis, brain tumors, and other diseases producing psychosis, all have rather characteristic eye findings.

Syphilis of the central nervous system seldom fails to involve the ocular mechanism. Ptosis, extrinsic musclar paralysis, pupillary irregularities, reduction of accommodative power, old chorioretinitis, and optic atrophy either primary or secondary, are all frequent findings.

Sclerosis of the vascular system can be demonstrated in a striking fashion through the fundiscopic examination. The blood vessels of the eye can be observed in their normal living condition. Since the retinal blood vessels closely resemble the intra cranial vessels, one is justified in assuming that changes in the retinal vessels are similar to those found in the brain.

Brain tumors do not always show eye changes in the early stage. However, this is not the rule. Choked disc is usually seen a few weeks before there is any noticeable decrease in visual acuity. Even before the choking of the disc there are frequently changes in the visual fields, and by this method frequently the tumor may be localized with a great amount of accuracy.

CO-INCIDENTAL EYE DISEASE

Eye disease as a co-incidental finding in the psychotic patient is probably a greater factor in the etiology of functional psychosis than is commonly supposed. Squint is a good example of such a condition. Since most of these conditions are congenital, the child is very early in life segregated and pointed out as being deficient by his playmates. As the patient grows older he must make adjustments for this defect in his social life. Some adjust well, others poorly.

When senility approaches, new eye problems arise. When the lens becomes clouded and vision is reduced the patient is faced with a new problem of

*From the Department of Ophthalmology, Osawatomie State Hospital, Osawatomie, Kansas.

adjustment. Some persons adjust well but others find the cataract a convenient curtain by which they can screen themselves out from the rest of the world, and live a life apart from society.

Presbyopia, even to the perfectly normal individual, is frequently a cause of great concern. The recession of the near point, may represent the recession of youth with all its hopes and dreams. And even after glasses are fitted, the patient may be constantly remained of his agedness every time the line of vision is shifted to the lower bi-focal portion of his glass.

The eye examination often furnishes a means by which medication can be safely given to patients. This is especially true in diabetes, arteriosclerosis, kidney disorders, many blood dyscrasias, metabolic disturbances and syphilis.

Of a special value is the eye examination in Tryparsamide therapy. Tryparsamide has undoubted value in the treatment of central nervous system syphilis but may be most dangerous if given without control. Although some kinds of blindness occur immediately following the first injection there is usually a gradual loss of peripheral vision in cases where the drug is not well tolerated. In this institution an eye examination including field studies precedes each injection of the drug. This precautionary measure has resulted in its withdrawal in several cases. By proceeding carefully in this manner in only a few cases has the peripheral vision failed to return to its original amount following the withdrawal of the Tryparsamide.

TOTAL NUMBER OF PATIENTS 430

Type of Disease		Incidence Number	Percentage
Decrease in vision:	20/20 to 20/50	155	36
	20/50 to 20/200	56	13
	20/200 to L.P.	32	7
	Light perception	10	3
Corneal opacities interfering with vision		17	4
Pupillary pathology		39	9
Manifest muscle anomalies		13	3
Lens opacities		66	15
Vitreous opacities		23	5
Fundus pathology: optic atrophy		23	5
chorio-retinitis		67	15
optic neuritis		2	0.5
marked arteriosclerosis		9	2
No pathology. Normal vision		123	29

The chart shows the relative proportion of eye diseases as found in the psychotic patient, as determined from the above 430 cases.

Practically all tuberculous individuals are Vitamin A deficient, whether as a cause of tuberculosis or an effect is not known. Marked Vitamin A deficiency might indicate that a thorough chest examination is in order if no other cause be found for this deficiency. Vitamin A deficiency is believed to be widespread. R. Harris and J. Harter, Southern Med. Jour., Oct., 1940.

CANCER CONTROL

TUMORS OF THE URINARY BLADDER

H. F. O'Donnell, M.D.

Wichita, Kansas

According to an average of statistics, tumors of the urinary bladder represent approximately 0.4 per cent of all human tumors. However, of all patients presenting themselves with urological symptoms, bladder tumors comprise about four per cent of all total number. This condition occurs more frequently in the male, the proportion running about four to one. They are most common in the sixth decade. Very little is known concerning the etiology of bladder tumors. That chemical irritation does play a part in the causation of certain bladder tumors cannot be doubted. Simon collected eighty-one cases in aniline dye workers.

Pathologically, the more common tumors of the bladder range from the benign papilloma to the infiltrating carcinoma. More rare are sarcoma, endometrioma, and chorio-epithelioma. Carcinoma of the bladder metastasizes late, often running a course of several years before this occurs. Even when they do metastasize, few are suspected clinically since the retroperitoneal lymphatics are first involved, and these are rarely palpable. Rarely more widespread metastases to bones, lungs, liver, or peritoneum occur.

The outstanding symptom of bladder neoplasms is painless hematuria. Dysuria may occur, especially after infection. Infiltrating tumors, near the ureteral orifices, commonly cause obstruction of the upper urinary tract, and symptoms suggesting renal pathology. In neglected cases, the frequency and pain on urination may become unbearable and the patients become anemic, cachectic, and uremic, presenting a picture of chronic carcinosis and sepsis.

When a patient passes bloody urine, or when there is unexplained frequency or dysuria, one should think of the possibility of bladder tumor. Hematuria is always a serious symptom, and demands thorough investigation. The fact that it may subside temporarily is no excuse for delaying examination. A careful cystoscopy will always reveal the presence of a neoplasm, except in rare instances when they occur in diverticulae. A fair idea of the type of tumor may be had from the cystoscopic examination.

Pneumocystography is of great value, particularly in determining the degree of infiltration of the bladder wall. This information is of extreme importance in prognosis, as the less infiltration the better the response to therapy. Also, this is a help to the roentgenologist in planning deep x-ray therapy.

In malignancies of the bladder, as elsewhere, we should attempt to choose the treatment that will give the best curative results with the least risk of life to the patient, and with the least suffering and inconvenience. Treatment must be varied according to the location, size, and degree of malignancy and infiltration. The different methods may be briefly outlined as follows:

1. Cystoscopic treatment — benign papillomata and papillary carcinomata of low grades of malignancy may be successfully treated by fulguration or resection of the tumor. Radon seeds may be combined with the above, or may be used alone in some cases.

2. In some cases, because of the size and location of the tumor, or because of obstructive lesions interfering with cystoscopy, suprapubic operation may be preferable. By this route, fulguration or radium therapy may be applied or the growth may be excised along with a margin of normal bladder wall.

3. More radical surgery consists of transplantation of the ureters, usually to the sigmoid, followed by total cystectomy. This procedure is being carried out more frequently in the larger surgical clinics, but, in spite of improved technique, still carries a discouraging mortality rate.

4. Results from x-ray therapy has apparently been improved by the use of the protracted, divided dose method, first suggested by Ferguson in 1936. More recently, a new method of contact therapy, by the use of a tube inserted through a cystotomy wound, offers the possibility of direct irradiation to the tumor. This method has been used too short of a time to give any statistical date, but it offers promise. Probably inoperable tumors deserve irradiation if feasible, and irradiation may be combined with cystoscopic or surgical methods in operable cases.

In conclusion, it may be said that our best prospect for better results must come from early diagnosis, which means complete urological investigation of all patients with hematuria without delay. Early diagnosis will enable us to obtain better results with the therapeutic measures now at our command.

"In no profession does culture count for so much as in medicine, and no man needs it more than the general practitioner."—Sir William Osler.

TUBERCULOSIS CONTROL

TUBERCULOSIS AND MILITARY SERVICE*

Ramsay Spillman, M.D.

The World War is twenty-two years behind us, yet the federal government pays in compensation for tuberculosis that originated in service about $3,000,000 each month. Analysis of voluminous and complicated federal reports dealing with service-acquired tuberculosis yields the following approximate figures:

Cost of vocational training	$129,000,000.
Insurance	130,000,000.
Compensation	600,000,000.
Hospital Care	100,000,000.
	$959,000,000.

The total number of men compensated for tuberculosis in 1922 (it is not feasible, from the annual reports, to run the figures back past 1922) was 36,600. In 1939, the total number was 55,634, including 1,947 deaths for that year.

The cost of taking a man who has tuberculosis into the service cannot be accurately calculated because of many factors that are still unknown and costs that are not apparent, but the author estimates that the figure would be somewhere around $10,000 per man to date, certainly not less than $7,500, to which should be added at least $50 a month for the rest of the man's life and compensation for his dependents after death.

Study of army procedure during the World War leads to the conclusion that the methods employed for the detection of tuberculosis were inadequate. This does not detract from the stature of that distinguished army surgeon, Colonel George E. Bushnell, the advisor to the Surgeon General on all matters pertaining to tuberculosis. It was the consensus of experts in 1917 that adult exogenous infection with tuberculosis is rare, that infection in childhood is well nigh universal and that every infection confers an immunity to anything short of massive doses of bacilli in later life. By the same token, adult tuberculosis was held to result from a reactivation of the antecedent infection. It was thought that for every soldier who had incurred tuberculosis as a result of military service, ten others had brought

*From Tuberculosis Abstracts—The Value of Radiography in Detecting Tuberculosis in Recruits, Ramsay Spillman, M.D., Jour. of Amer. Med. Assn., Vol. 115, No. 16, October 19, 1940.

the disease with them into the army. Present-day experience does not uphold this belief—to cite at random just one of numerous communications, Diehl and Myers prove the development of six cases of tuberculosis in one college fraternity a year after one of its members was found to have a positive sputum, and the development of tuberculosis in a girl several years after her sorority roommate was found to have tuberculosis.

The problem at hand is this: How can the recruit who already has active tuberculosis be recognized, that he may be rejected for the protection of himself and others? Colonel Bushnell trained a large number of highly competent diagnosticians, to whom he imparted the significance of the posttussal moist rale and the technic of eliciting it. The patient is instructed to cough gently at the end of deep expiration. When he inhales after the cough the rale is heard. The presence of persistent moist rales was the criterion for determining the existence of tuberculosis. Several prominent physicians and radiologists tried to induce the Surgeon General to make the radiograph the decisive factor in the diagnosis of pulmonary tuberculosis. The practical difficulties in the way of the adoption of the radiograph were, however, insuperable, according to Colonel Bushnell, in which conviction he was supported by a special committee of the Council of National Defense which investigated the question. Among the difficulties were the enormous cost of photographing, the impossiblity of obtaining a sufficient number of plates (made of glass and most of it imported from Belgium) and the lack of trained radiologists.

Draft boards set up in every community added to the difficulty. These boards included local physicians who were supposed to reject draftees with disqualifying defects. While most draft boards functioned honestly and intelligently there is evidence in official publications that, far from weeding out the manifestly tuberculous, some boards actually concentrated tuberculosis at some of the camps, thinking that they would benefit by change of climate and by army life. In the re-examination of 19,827 men at Camp Kearny, for example, 853 cases of tuberculosis (4.83 per cent) were discovered.

With this background, what should our procedure be in the present situation? Of the available methods for the mass diagnosis of tuberculosis among recruits, physical examination and radiography need to be considered on a basis of relative merits. Evidence of the inadequacy of physical examination to detect tuberculosis is overwhelming. The last word so far as the army was concerned in 1917 was that "the only trustworthy sign of activity of apical tuberculosis is the presence of persistent moist rales." In the light of present-day knowledge this sign is worth only about 12.5 per cent. In spite of the acknowledged skill of the army examiners of 1917 only about one-eighth of the actually existent clinically significant tuberculosis was detected.

The radiograph should be the criterion in weeding out tuberculosis in today's mobilization. In what form? Fluoroscopy gives no record and is highly subjective. As demonstrated by the experience of a large life insurance company, fluoroscopy in skillful hands may serve as an alternative to a prohibitively expensive routine of roentgenography, but even this company has, since 1936, been making routine roentgenograms of the chest of every applicant for employment.

The paper roentgenogram is speedy and convenient and cheaper than celluloid. Radiologists as a whole do not favor the paper radiogram while tuberculosis workers are enthusiastic over it. If celluloid films were available on rolls like the paper rolls they would undoubtedly be preferred. Paper roentgenograms are vastly preferred to no roentgenograms but celluloid would be preferred if the author were given a choice.

Photography of the fluoroscopic screen is another possibility. But if this method, known as fluorography, is no more than ninety per cent efficient as compared with the standard celluloid roentgenogram, as the author believes, the ten per cent shortage in diagnosis would cost a great deal of money in compensation later. Fluorography is today a highly promising method but awaits further improvements before it can compete with celluloid roentgenograms.

For radiography there are many kinds of apparatus varying in price and capacity. What is most important, however, is the skill and knowledge of the operator.

The author's final conclusion is:

> "A normal chest roentgenogram should be the criterion of acceptance in a future mobilization, including the proposed draft for training, and it should be made and reported before the recruit has spent a night away from his own roof to obviate a repetition of the claims for aggravation of pre-existing tuberculosis which occurred during and after the World War."

TUMORS OF PLEURA AND PERITONEUM, ANATOMO-HISTOLOGICAL STUDY

(Continued from Page 18)

more than one evolutive capacity, that is, cambial cells are true mesodermal cells and can differentiate toward mesothelium as toward mesenchyma. However, in the serosas, as well as in the peritoneum and in the pleura, we have to take into account also the preponderant role of the reticulo-endothelial system

and the reticular cells, which have the capacity of transformation into macrophages and other mesenchymal elements. These elements, present in the areolar tissue and representing a different system and function than the surface lining cells, may also have their tumors and their presence should always be taken into consideration, particularly in those tumors, which have more marked connectival characteristics. The cambial cell of these elements will be very near to the cambial cell of the surface lining elements and in reality as an end point it would be necessary to identify these two cambial cells as one single element, that is, a mesodermal cell. Very probably the evolutive capacities of the mesothelium in tissue culture were not those of the adult elements but of the mesodermal cells or central cells included in the culture.

With such a unitary point of view in mind and without attempting to explain their origin from uncertain or hypothetical embryonal germs, we can easily explain the totality of the tumors of the serosa, by admitting their direct origin from a cambial mesodermal cell, normally present and differentiating toward reticulo-endothelial forms on one side (mesenchyma) or toward mesothelial evolution and orientation (mesothelium) on the other. We exclude, however, from such groups, the meningeal tumors, contrary to the view of Geschichter, because we consider them as derivative of the ectoderm.

There are already so many names in the literature that the addition of newer names would be unwarranted. Since the name of mesothelioma has not been given to any other tumor outside the serosa, and to avoid confusion with the tumors derived from more strictly mesenchymal derivatives in other localities, such a name could be preserved, without prejudice to their true derivation from more immature elements of the mesoderma.

(The original article contains ten photomicrographs and thirty-four references.)

NEWS NOTES

LEGISLATION

The House of Representatives and the Senate choose officers for the 1941 Legislature at party caucases held on January 13 and announcement was made at the first sessions held on January 14. Mr. Clay Carper of Eureka was elected as speaker of the House and Senator Kirke Dale of Arkansas City as President pro-tem of the Senate. Other officers elected were as follows: Mr. F. L. Hagaman of Kansas City, majority-party floor leader; Mr. Buell Scott of Johnson, speaker pro-tem; and Mr. Frank Kessler of Wichita, minority-party floor leader in the House and Senator Robert Lemon of Pittsburg as minority-party floor leader in the Senate.

Lieutenant Governor C. E. Friend of Lawrence, who appoints the Senate Committees, has announced that the following Senators will serve as members of the Senate Committee on Temperance and Public Health:

Senator W. A. Barron, Phillipsburg, Chairman.
Senator Robert S. Lemon, Pittsburg, Vice-Chairman.
Senator J. B. Carter, Wilson.
Senator Joe R. Beeler, Jewell.
Senator W. R. Brown, Emmett.
Senator M. V. B. Van DeMark, Concordia.
Senator Elmer E. Euwer, Goodland.

The House Committee on Hygiene and Public Health, which will be appointed by Mr. Carper, has not as yet been announced.

The first bill in the House was a proposal introduced by the osteopaths to broaden their rights of practice and to permit them to practice medicine and surgery. The osteopath bill (H. B. No. 1) which was sponsored by Representative D. B. Fordyce, an osteopath of Labette County, is printed below. (The parts shown in italics would represent new additions to the present osteopathic law, the parts shown in parenthesis would represent deletions from the present osteopathic practice act, and the remaining portions are identical with the present law).

AN ACT concerning the practice of osteopathy, providing for educational requirements, examination and licensing of osteopathic physicians and surgeons, amending section 65-1201 of the General Statutes of 1935 and repealing said original section.

Be it enacted by the Legislature of the State of Kansas:

Section 1. Section 65-1201 of the General Statutes of 1935 is hereby amended to read as follows: Sec. 65-1201. Any person not now a (registered) *licensed* osteopathic physician under the laws (in) *of* this state, before engaging in (the) practice *as an osteopathic physician and surgeon* (of osteopathy) in this state, shall make application to the board of osteopathic examination and registration, on a form prescribed by the board, for a certificate to practice (osteopathy) *as an osteopathic physician and surgeon,* giving (first): *(1)* His name and age, which shall not be less than twenty-one years, and residence; *(2) evidence of having complied with the pre-professional educational requirements herein specified;* (second) *(3)* the name of the school or college of osteopathy from which he graduated, which shall have been in good repute as such, at the time of the issuing of his diploma, as determined by the board; (third) *(4)* the date of his diploma, *and* evidence that such diploma was granted on personal attendance and completion of the course of study (of not less than four terms of five months each and such other information as the board may require and sufficient) *herein prescribed; (5)* evidence that the applicant is of good moral character, *and such other information as the board may require;* (6) such application shall be accompanied by a fee of twenty-five dollars. (No holder of a diploma issued after June, 1907, shall be admitted to an examination, nor shall a certificate to practice osteopathy be otherwise granted, by said board, to any such applicant unless said) *An* applicant *for examination* shall (have) *present evidence of* a diploma of graduation from *a* high school, academy, state normal school, college or university, *or* a certificate of examination for admission to the freshman class of a reputable (literary or scientific) college, approved by (afore-

said) *the* board, (as a preliminary education) before taking up the study of osteopathy and (shall have graduated, after personal attendance, from an osteopathic school or college of good repute wherein the course of study shall consist of at least three years of nine months each, in three separate years, and after June, 1915, said applicant shall have a diploma of graduation from a high school, academy, state normal school, college or university, a certificate of examination for admission to the freshman class of a reputable literary or scientific college, approved by the aforesaid) *after July 1, 1941, an applicant for examination shall, in addition to the pre-professional educational requirements above set out, present evidence of the completion of at least one year of pre-professional education of a college grade in a college approved by the board before commencing the study of osteopathy. After July 1, 1944, an applicant for examination shall present evidence of having completed at least two years of pre-professional education of a college grade in a college approved by the board before commencing the study of osteopathy* (and) *An applicant* shall (have) *produce evidence of having* graduated, after personal attendance, from an osteopathic school or college of good repute wherein the course of study shall consist of at least four years of (eight months) *thirty-six weeks* each, in each separate year. (Provided, however, That if any applicant shall have completed a course of study in any such osteopathic school or college, consisting of three years of nine months each, and a post graduate course of at least five months, aggregating at least thirty-two months, such course shall be accepted in lieu of the full period of four years of eight months each provided for in this act). The board shall subject all applicants to a practical examination, as to their qualifications for the practice of osteopathy, in writing, in the subjects of: (*1*) Anatomy, (*2*) physiology, (*3*) physiological chemistry and toxicology, (*4*) pathology, (*5*) diagnosis, (*6*) hygiene (*7*) obstetrics and gynecology, (*8*) *operative* surgery, (*9*) principles and practice of osteopathy, (*10*) *bacteriology,* (*11*) *drug therapy,* (*12*) *physiotherapy* and such other subjects as the board may require. This may be supplemented by other practical examinations such as the board may by rule determine. If (such) *the* examination is passed in a manner satisfactory to the board, then the board shall issue to said applicant a certificate granting him the right to practice *as an osteopathic physician and surgeon, which shall entitle the grantee of such certificate to practice* osteopathy in (the state of Kansas) *all of its branches,* as taught and practiced in (the legally incorporated) colleges of osteopahty of good repute, *including the right to practice operative surgery and obstetrics, and administer antiseptics, anaesthetics, narcotics and biologics: Provided, however, Before any person granted the right to practice as an osteopathic physician and surgeon, shall perform major surgical operations, he shall present evidence to the board of at least two years' service as an intern, or two years' actual experience as an assisting or operating surgeon and receive from the board, if it is otherwise satisfied with his qualifications, a certificate certifying his qualifications to perform major surgical operations.* All (examination papers) *grades made on examinaiton* shall be *permanently* recorded and *examination papers* kept by the board *for a period of five years.* Any person failing to pass (such) *the* examination may be re-examined at any regular meeting of the board within one year from the time of such failure, without additional fee: *Provided,* (That a physician's certificate issued by a reputable school of osteopathy to a graduate from a reputable school of medicine after an attendance in an osteopathic school or college of good repute, of not less than two terms of five months each, may be accepted by the board the same as a diploma, and the holder thereof be subject to the same regulations in all other respects as other applicants before the board; Provided, That after the year, 1922, he shall have attended two terms of not less than nine months each in two separate years: Provided, That after they year 1915 he shall have attended three terms of not less than eight months each in three separate years: Provided further, That) *The board is given twenty days notice, in writing.* The board may, in its discretion, dispense with an examination. (in the case,) *and issue a certificate granting the right to practice as an osteopathic physician and surgeon, to* (first of) an osteopathic physician (duly authorized to practice osteopathy) *who presents a legal and valid certificate issued after examination by the legally constituted board* (in) *of* any state (or) territory (or the), District of Columbia (or any foreign country,) *or a phycisian and surgeon* who presents a certificate (of license) issued (after an examination) by (a legally constituted board of said state, territory, District of Columbia, or foreign country, accorded) *the National Board of Examiners for osteopathic physicians and surgeons, granted* only to applicants of equal grade *and educational qualifications* (with) *as* those required in this state, *at the time such license was issued and who has satisfactorily passed an examination covering the subjects listed herein for examination.* The secretary of the board may grant a temporary permit *to practice as an osteopathic physician and surgeon valid only* until (a) *the next* regular meeting of the board, or to such time as the board can conveniently meet, to (one whom he considers eligible to practice in the state and who may desire to commence the practice immediately, Such permit shall only be valid until legal action of the board can be taken.) *such applicants only whose credentials are approved by the credential committee of the board.* The board (may) *shall* refuse to grant a certificate to any person convicted of *a* felony, or *guilty* of gross unprofessional conduct, or who is addicted to any vice to such *a* degree as to render him unfit to practice *as an osteopathic physician and surgeon* and may, after due notice and hearing, *suspend or* revoke such certificate for like cause. *Each person holding a legal and valid certificate to practice osteopathy in this state at the time of the passage of this Act shall without further proof be entitled to receive the certificate to practice as an osteopathic physician and surgeon hereinabove described, and to enjoy the rights and privileges herein provided for a person holding such a certificate.*

Sec. 2. Section 65-1201 of the General Statutes of 1935 is hereby repealed.

The public health nurse is the advance scout in the business of finding tuberculosis. She, more than any other person in the community, is instrumental in getting contacts examined and active cases under treatment. Crusader, October 1939.

OSTEOPATHS

Judge Clark A. Wallace of the Twenty-fourth Judicial District of Kansas handed down the following opinion in the case of State of Kansas, ex rel., vs. C. V. Moore, now pending in the District Court of Barber County:

The matter now before the Court is plaintiff's motion to strike certain parts of defendant's answer.

The plaintiff has filed its petition seeking the ouster of defendant from the practice of medicine and surgery, alleging that defendant is not licensed under the Board of Medical Registration and Examination to practice medicine and surgery and further alleging certain general and specific acts as constituting such practice.

The defendant by answer admits that he is not so licensed, and that he has committed certain acts complained of by plaintiff. He generally denies all other allegations of the petition, and then alleges that he is, and is duly licensed as, an osteopathic physician under the laws of Kansas, and that the acts done and performed by him were and are authorized by his license to practice as an osteopath.

Plaintiff's motion is to strike from the answer all allegations justifying defendant's conduct because of his learning and license as an osteopath.

To sustain the motion is to hold that the portions of defendant's answer sought to be stricken do not raise or present any issue material or relevant to the relief sought.

I think the motion should be sustained, primarily upon the authority of State ex rel., v. Gleason, 148 Kan. 1.

The defendant contends, however, that there is a general misunderstanding as to what was meant in the opinion of the Gleason case, and submits to this Court the arguments made to the Supreme Court in the case of Gafney v. Wilson County Hospital, not yet finally decided. It is said that the Gafney case was brought to clarify the situation created by the decision in the Gleason case. In ruling upon this motion, therefore, prior to a decision in the Gafney case it may be advisable for this court to more fully state its views:

This action is brought to restrain defendant from the practice of medicine and surgery. G.S. 65-1005 defines the practice of medicine and surgery, in part, as follows:

> "Any person shall be regarded as practicing medicine and surgery * * * who shall prescribe, or who shall recommend for a fee, for like use, any drug or medicine, or perform any surgical operation of whatsoever nature for the cure or relief of any wounds, fracture or bodily injury, infirmity or disease of another person, or who shall use the words or letters 'Dr.' 'Doctor,' 'M.D.,' or any other title, in connection with his name, which in any way represents him as engaged in the practice of medicine or surgery."

Plaintiff's petition clearly charges that the defendant is not licensed so to practice medicine and surgery, and the commission of various acts by the defendant constituting such practice.

Does the fact that the defendant is learned as an osteopath and is licensed by the Board of Osteopathic Examination and Registration as provided by G.S. 65-1201 constitute a defense?

Particularly the defendant is charged with practicing medicine and surgery by performing tonsilectomies using surgical instruments and with prescribing and dispensing medicines and recommending drugs as a remedial aid.

In State v. Johnson, 84 Kan. 411, osteopathy is defined, and its practice distinguished from the practice of medicine and surgery.

In State ex rel., v. Eustace 117 Kan. 746, it was held that a registered osteopath is not entitled to practice optometry. The Court said:

> "but the practice of osteopathy, while it may be a part of the art of healing, is not comprehended within the term 'practicing medicine,' nor within the term 'surgical operation,' as used in section 65-1005 of the Revised Statutes."

In State ex rel., v. Gleason, supra, it is stated generally that osteopathic physicians in Kansas are not licensed to administer drugs and narcotics and practice drug therapy in so far as drugs are given as remedial aids, and that osteopathic physicians are not licensed to practice surgery if the term extends beyond the manipulation into the general field of operative surgery with surgical instruments.

The United States Circuit Court of Appeals, Tenth Circuit, in the case of Kansas State Osteopathic Association v. Burke, felt itself bound by the decision of the Supreme Court of Kansas, in the Gleason case, and held:

> "We, are therefore, of the opinion that the statutes of Kansas as construed by the highest court of that State prohibit the use, sale or distribution of narcotic drugs for any purpose by an osteopathic physician."

The Circuit Court of Appeals apparently had no misunderstanding as to what was meant by the opinion in the Gleason case and this Court is much more bound by the decision in the Gleason case than was the federal court.

Furthermore, in Gafney v. Wilson County Hospital, 152 Kan. 1, and again by supplemental order made July 6th, 1940, the Supreme Court ordered certain portions of plaintiff's petition stricken, indicative, at least, that the Court had no misunderstanding as to what was meant in the Gleason case, and was adhering to the decisions made therein, particularly with reference to what constitutes the practice of medicine and surgery.

As I view the decisions, the practice of osteopathy is separate and distinct from the practice of medicine and surgery. The purpose for which a license to practice is sought and the authority granted by the license issued appeals to me as having decisive probative effect. While, "an osteopathic school or college of good repute," may give instruction in drug therapy and surgery and other branches pertaining to the care of the body, yet its students, when graduated are osteopaths, not physicians and surgeons. When an osteopath is licensed by the Board of Examination and Registration of Osteopathic Physicians in Kansas, he is licensed only to practice osteopathy, and not medicine and surgery, as that term is defined by G.S. 65-1005. If, within the realm of imagination, suppose that an honor graduate of John Hopkins becomes famous as a physician and surgeon in the Mayo Clinic, then removes to Kansas, takes an examination before the Board of Examination and Registration of Osteopathic Physicians and is licensed thereby. What is his status? Is he any more than the defendant in this case,—a licensed osteopath? Would he be any more

entitled to practice medicine and surgery under the laws of Kansas than is the defendant in this case? I think not.

What is taught in "osteopathic schools of good repute" may be of much concern to the Board of Examination and Registration of Osteopathic Physicians. What is taught in such schools, however, cannot make lawful what the statute (G.S. 65-1006) declares to be unlawful. The issue in this case is whether or no, the defendant is unlawfully practicing medicine and surgery. In the trial, we shall be primarily concerned with G.S. 65-1005, with G.S. 65-1201, very little, if any at all.

The Court is of the opinion that plaintiff's motion to strike should be sustained, except as to paragraph No. 1 of the second defense which might become, upon some phase of the evidence, material. Such will be the order at the next motion day in Medicine Lodge, January 9th, 1941.

An identical opinion was also handed down by Judge Wallace in the similar case, State of Kansas, ex rel., vs. C. R. Muecke, pending in the Pratt County District Court.

ANNUAL MEETING

The Shawnee County Medical Society has announced that the following speakers have already been scheduled for the next Annual Session which will be held in Topeka on May 12-15: Dr. Louis J. Hirschman, proctologist of Detroit, Michigan; Dr. Eugene M. Landis of the University of Virginia, Charlottesville, Virginia; Dr. John A. Toomey, pediatrician, of Cleveland, Ohio; Dr. Albert M. Snell, of the Mayo Clinic, Rochester, Minnesota; Dr. Roger L. J. Kennedy, pediatrician, of the Mayo Clinic, Rochester, Minnesota; Dr. Sumner L. Koch, of Northwestern University, Chicago, Illinois. Dr. T. R. Gittens of Sioux City, Iowa, and Dr. B. Y. Alvis, of Washington University, St. Louis, Missouri, are the speakers scheduled for the Eye, Ear, Nose and Throat Section of the Society meeting who have accepted to date. Other speakers will be announced at a later date.

A new procedure is being advocated this year in that the House of Delegates will meet on Tuesday and Thursday and will not conflict with any of the scientific meetings.

Technical exhibit invitations were forwarded on December 28 to companies approved by the Committee on Technical Exhibits. Acceptances have been received to date from the following concerns:

Gerber Products Company, Fremont, Michigan.
Smith, Kline & French Laboratories, Philadelphia, Pennsylvania.
Riggs Optical Company, Kansas City, Missouri.
The C. V. Mosby Company, St. Louis, Missouri.
M. & R. Dietetic Laboratories, Inc., Columbus, Ohio.
Mid-West Surgical Supply Company, Wichita, Kansas.
Parke, Davis & Company, Detroit, Michigan.
Merck & Company, Inc., Rahway, New Jersey.
J. B. Lippincott Company, Philadelphia, Pennsylvania.
E. R. Squibb & Sons, New York, New York.
Borden Company, New York, New York.
Eli Lilly & Company, Indianapolis, Indiana.
Burroughs Wellcome & Co., Inc., New York, New York.
Mead Johnson & Company, Evansville, Indiana.
Petrolagar Laboratories, Inc., Chicago, Illinois.
A. J. Griner Company, Kansas City, Missouri.
John Wyeth & Brothers, Inc., Philadelphia, Pennsylvania.
Wm. S. Merrell Company, Cincinnati, Ohio.
Quinton-Duffens Optical Company, Topeka, Kansas.
C. B. Fleet Company, Inc., Lynchburg, Virginia.
The Medical Protective Company, Fort Wayne, Indiana.
American Hospital Supply Corp., Chicago, Illinois.
Holland-Rantos Company, Inc., New York, New York.
The W. E. Isle Company, Kansas City, Missouri.
The Mennen Company, Newark, New Jersey.
Archer-Taylor Drug Company, Wichita, Kansas.
The DeVilbiss Company, Toledo, Ohio.
General Electric X-Ray Corp., Chicago, Illinois.
McIntosh Electric Corporation, Chicago, Illinois.

The Committee on Scientific Exhibits particularly desires that the scientific exhibit section of the Topeka meeting shall include a large number of presentations by Kansas members. It has written the councilors and the county medical societies requesting that exhibit invitations be extended to all members. Requests for scientific exhibit space should be forwarded to Dr. C. B. Trees of Topeka, chairman of the committee.

NEW LICENSES

The Kansas State Board of Medical Registration and Examination met in regular session in Topeka, on December 10-11, 1940. Licenses were granted to eighteen doctors, twelve by examination and six by reciprocity. The following is the list of those who met the requirements of the Board:

Name	Town
Aldis, John	Osawatomie
Binder, Clifford Frederick	Omaha, Nebraska
Ensign, Paul Roselle	Topeka
Fast, William Spencer	Atchison
Glenn, Lyle George	Protection
Gore, Arthur Francis	Council Bluffs, Iowa
Green, John Dryer	McPherson
Greenwood, Edward David	Topeka
Hanson, John Willard	Manhattan
Herbst, Robert Rudolph	Wichita
Horton, Robert John M.	Manhattan
Jewell, Thomas Clifford	Medicine Lodge
Joss, Charles Stevens	Topeka
Miller, Joseph Edward	Los Angeles, California
Roode, Albert Graham	Manhattan
Rose, Ralph James	Topeka
Taylor, Finis Alexander	Newton
Wittmann, Albert Frank	Wichita

SELECTIVE SERVICE

Kansas medical facilities are now fully organized to assist in the handling of the national defense and selective service programs.

Medical assistance is being provided to each of the 126 Kansas county selective service boards in the handling of physical examinations for selective service registrants. Thru an arrangement approved by the Kansas Selective Service Commission it is possible for all doctors of medicine to assist the medical examiners in the provision of these examinations, and in accordance therewith, a considerable number of counties have arranged to examine registrants on a rotating staff basis. Approximately 125 physicians are serving as members of the seventeen medical advisory boards located in this state which will assist in the handling of physical examination appeals desired by registrants or county boards. Four physicians are serving

as members of the four appeal boards in Kansas which will hear appeals on other questions.

The United States Army has notified the Society that it desires to utilize the services of Kansas civilian physicians as members of the induction boards in the state, located at Wichita and Leavenworth. These boards, which consist of: three internists, one general surgeon, one orthopedic surgeon, two ophthalmologists, one otorhinlaryngologist, one neuropsychiatrist, one clinical pathologist, and one dentist; will provide the final physical examinations of registrants approved by the county boards for induction in to military training. The Sedgwick County Medical Society and the Leavenworth County Medical Society are supervising necessary arrangements in that regard.

All except 149 of the 2,066 American Medical Association medical preparedness questionnaires in Kansas have been completed and returned. Eighty-six of the physicians who have not as yet forwarded the questionnaires are members of the Society. The remaining ones are nonmembers. The Society is corresponding with these physicians at the present time in the hope of obtaining a 100 per cent return of the questionnaires from this state.

Almost all of the county medical societies have appointed committees on medical preparedness. The state Society Committee on Medical Preparedness, consisting of Dr. F. L. Loveland of Topeka; Dr. C. C. Nesselrode of Kansas City; Dr. C. D. Blake of Hays; Dr. J. M. Porter of Concordia; Dr. N. E. Melencamp of Dodge City; Dr. J. J. Brownlee of Hutchinson; Dr. J. F. Gsell of Wichita, and Dr. J. T. Reid of Iola, is cooperating closely with Dr. R. W. Fouts of Omaha, Nebraska, the regional member of the American Medical Association Committee on Medical Preparedness in the coordination of other Kansas medical activities under the National defense program.

NEW WAGNER BILL

Senator Robert F. Wagner of New York announced recently that he will introduce a new bill pertaining to public health and medical care in the present Congress. Senator Wagner stated that his bill will be intended to follow the suggestions contained in President Roosevelt's Congressional message concerning the provision of medical care and that it will include a total federal appropriation of $98,000,000 in the first year, which will be expended in part as follows: $35,000,000 for the operation of approved state plans for medical care; $10,000,000 in federal grants for temporary disability compensation, $8,000,000 for hospital construction, $13,000,000 for medical services to children, $15,000,000 for general public health work, and $8,000,000 for maternal and child health services.

APPOINTMENT

Dr. A. K. Owen of Topeka has been appointed Councilor for the State of Kansas by the Radiological Society of North America.

MEETING

A meeting of Kansas serologists was held on December 12 at Topeka, with Dr. R. C. Arnold of the United States Venereal Disease Research Laboratory of Staten Island as the speaker. Dr. V. D. Foltz of the Kansas State College of Manhattan conducted the meeting. Other speakers were: Dr. Charles A. Hunter of Topeka, Dr. J. L. Lattimore of Topeka, Dr. N. P. Sherwood of Lawrence, and Mr. Frank Victor of Topeka.

A sub-committee appointed in accordance with recommendations made at the above meeting, met in Emporia on January 5 for further consideration of evaluation and standardization of Kansas clinical laboratories. Dr. H. H. Asher of Wichita, Dr. R. T. Westman of Kansas City, Dr. C. A. Hellwig of Wichita, Dr. N. P. Sherwood of Lawrence, Dr. V. D. Folz of Manhattan, Dr. Charles A. Hunter of Topeka, Mr. Frank Victor of Topeka, Dr. Fred P. Helm of Topeka, Dr. J. L. Lattimore of Topeka, Mr. Martin Duprey of Hutchinson and Dr. R. H. Reidel of Topeka, members of the sub-committee, attended the latter meeting.

POST GRADUATE CLINIC

The tenth annual Post Graduate Clinic of the University of Kansas School of Medicine will be held on April 7 to 10, inclusive. The Committee on Post Graduate Clinics is making every effort to offer a program that will be of value to the general practitioner in his office practice. Kansas physicians are invited to write to Dr. Lee H. Leger, Chairman of the Committee on Post Graduate Clinics, School of Medicine, University of Kansas, Kansas City, Kansas, for information relative to the course of the clinic.

The program will appear in the March issue of the Journal.

MEDICAL RACKETS

Medical rackets, ranging from the one wherein persons representing themselves as Federal agents seek to obtain "excess supplies" or others supplies of narcotics from doctors and particularly the relatives of deceased doctors, to the familiar ones pertaining to the collection of doctors accounts, are heard of from time to time. Word has come from Colorado that a medical racketeer is presently working in that state. The person represents himself as a buyer of second hand medical and dental equipment. He proceeds to obtain the confidence of physicians and offers to buy obsolete and unused equipment. He then explains that check in payment will be issued by his company and leaves with the instruments and is not heard from again.

FEDERAL INCOME TAX

Several new changes in the federal income tax law are described in the following bulletin which has been published by Mr. Frank E. McMullan, acting collector of internal revenue in Kansas.

> The Revenue Act of 1940 has made important changes with respect to the liability of individuals for the filing of income tax returns. Individuals under the following circumstances are required to file returns covering the calendar year 1940:
>
> Single individuals, or married individuals not living with husband or wife, having a GROSS INCOME of $800.00 or more.
>
> Married individuals living together having a combined GROSS INCOME of $2,000.00 or more.
>
> The net income is no longer to be used in determining the liability for the filing of a Federal income tax return. The liability of a citizen or resident of the United States to file a return is dependent upon his status as a married or single person, and the amount of his GROSS INCOME. Therefore, every citizen or resident of the United States will be required to file

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a return for the taxable year 1940 if his GROSS INCOME in 1940, regardless of the amount of his net income, comes within the amount specified above for his particular status. A return must be filed even though, by reason of allowable deductions from gross income and of allowable credits against net income, it develops that no tax is due.

Form 1040A should be used for GROSS INCOME of not more than $5,000 derived from salaries, wages, interest, dividends, and annuities. Form 1040 should be used for GROSS INCOME from salaries, wages, interest, dividends, and annuities of more than $5,000; or if any part of your income is derived from other than salaries, wages, interest, dividends, or annuities, Form 1040 should be used regardless of the amount of your income. While returns must be filed on or before March 15, 1941, with the collector of internal revenue for the district in which you reside, it is urged that they be filed as soon as possible after January 1.

If in doubt as to your liability for the filing of a return and if your employer has no blank return forms available, make request of the collector of internal revenue for the district in which you reside, or of any deputy collector stationed in your vicinity, for the 1940 individual income tax return and the printed instructions accompanying the form.

Failure of individuals, under the circumstances outlined above, to file returns will subject them to the penalties prescribed by law.

MINUTES

The following are the minutes of the meeting of the Committee on Medical Schools held in Wichita on December 15.

A meeting of the Committee on Medical Schools was held in Wichita on December 15. The following persons attended: Dr. F. J. McEwen, Chairman, Wichita; Dr. H. R. Wahl, Kansas City; Dr. N. P. Sherwood, Lawrence; Dr. O. O. Stoland, Lawrence, and Mr. Clarence Munns of Topeka. The remaining members were unable to attend by reason of inclement weather.

The minutes of the last meeting were read and approved.

The matter of out-of-state admittances to the University of Kansas School of Medicine was discussed. It was pointed out that most medical schools follow a policy of admitting nonresident students; that arrangements are thereby possible to provide internships, residencies, and similar training in other states on a reciprocity basis; that Kansas has several arrangements of this kind in existence; and that if out-of-state students are not accepted other states will obviously have reason not to accept Kansas students in their medical schools. On the other hand, it was agreed that serious difficulties are experienced in refusing to accept Kansas students at the University of Kansas School of Medicine in order that out-of-state students may be accepted.

It was felt that a medical school section in the Journal would afford many advantages to both the medical school and the profession. The central office was asked to discuss this matter with the Editorial Board, and to have the Board write Dean Wahl concerning arrangements in this regard if sufficient space is available.

The appropriation and other legislative needs of the medical school were discussed and the committee agreed to assist in any way desired in this connection.

Dean Wahl reported that the medical school has recently completed its new x-ray department.

The question of patient admittance at the University of Kansas Hospitals was further considered and Dean Wahl stated he believed progress is being made in the handling of this problem.

A suggestion was also made that the medical school exhibit at state meetings are of assistance and interest to the membership, that numerous exhibits of this kind should be presented and that as many members of the medical school faculty as possible should be present during state meetings.

The next item of discussion pertained to the plans for this year's medical economic course at the school. Dean Wahl and Dr. McEwen were asked to confer further on this subject.

Adjournment followed.

The Minutes of the meeting of the Committee on Maternal Welfare held in Wichita on December 29 are as follows:

A meeting of the Committee on Maternal Welfare was held at the Lassen Hotel, Wichita, December 29, 1940. Present were: Drs. Ray A. West, Wichita, chairmain; Porter Brown, Salina; L. A. Calkins, Kansas City; Howard C. Clark, Wichita; C. O. Meredith, Emporia; L. G. H. Lewis, McPherson; H. R. Ross, Topeka; and Mr. John F. Austin, executive secretary of the Sedgwick County Medical Society.

1. The meeting was called to order by the chairman and the minutes of the previous meeting were read and approved.

2. President West announced the formation of a Society Committee on Child Welfare, leaving this committee to deal solely with maternal welfare problems.

3. It was announced that the brochure on maternal welfare is now being edited. Dr. Ross said he believed the State Board of Health had funds with which to print several thousand copies. The committee felt that copies should go to all physicians in the state, libraries, and possibly to women's clubs.

4. Dr. Calkins, chairman of the sub-committee on mothers' training classes, said no further effort in this line had been made since the last meeting. He reported mothers' classes for the indigent are carried out in the maternity center and out-patient department of the University Hospital which reach half of the pregnant women in Wyandotte county. The women are given a diploma if they attend the full series of eight lectures.

Regarding such a program for the state, Dr. Calkins suggested it might be carried out in one of three ways:

(a) Lectures by doctors.
(b) Public health nurses.
(c) Obstetrical nurse.

Such programs should be under the direction of the county medical society, which should supervise the program. Dr. Calkins explained that Cleveland started mothers' classes six years ago which were open to all women. In that time the maternal death rate dropped from four per thousand live births to 1.1 per thousand.

Motion by Dr. Brown, duly seconded and passed, that the committee accept Dr. Calkin's report, endorsing a plan of this kind, and requesting Dr. West to

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ask the State Society to approve a plan for mothers' classes.

5. Dr. Howard Clark, chairman of the sub-committee on incubator program, reported that at least one incubator has been placed in each county in the state, although there are a number of hospitals which do not have incubators. Dr. Ross explained that the State Board of Health's hot water type incubator can be obtained for $17.00 in lots of fifty.

Dr. Ross reported the maternal death rate for 1939 for Kansas was 3.4 per thousand live births, which was the lowest for all time. Neonatal deaths were twenty-six per thousand and the birth rate for 1939 was 16.3 per thousand population.

The committee felt that the incubator problem was satisfactory at this time. It was suggested that local interest might be created among civic clubs towards the purchase of additional incubators.

Motion by Dr. Calkins, duly seconded and passed, that the sub-committee on incubators be commended on their work in the past year.

6. Dr. West reported that the obstetrical rules adopted by the committee and bulletinized to the profession were presented to the Kansas Hospital Association. Opposition was found, especially in some of the smaller hospitals. The provision for consultation in the rules seems to be the debatable factor.

Motion by Dr. Calkins, duly seconded and passed, that the Council of The Kansas Medical Society be asked to approve the program and to recommend its adoption by the State Hospital Association.

7. Letters from the Wichita Junior Chamber of Commerce and the Civitan Club regarding their drive for legislation for pre-marital Wassermann tests were read before the committee. Motion by Dr. Calkins, duly seconded and passed, that the committee reaffirm its previous recommendation that pre-natal Wassermann tests be run on all pregnant women, but that the committee go no further than this, since it is not within its province.

8. There was much discussion about the formation of a Kansas Obstetrical Society in connection with a post-graduate program on maternal welfare. Brought out in the discussion were suggestions that the University of Kansas Hospitals give credit for post-graduate work in obstetrics and/or the extension division of the University of Kansas be granted funds from the State Board of Health to carry the post-graduate program over the state. The discussion resulted in the following motion by Dr. Meredith, duly seconded and passed: That the Maternal Welfare Committee organize the Kansas Obstetrical Society and that such society cooperate with the State Board of Health in conducting post-graduate work in obstetrics.

9. Kansas' mortality and morbidity report was made by Dr. Ross, who said that reports from physicians were coming in satisfactorily, and on the basis of these reports statistics show that fifty per cent of the maternal deaths are preventable. These statistics were compiled by counties and not by hospitals, i.e. a patient from one county who is being treated in a hospital in another county would be counted in her home county.

The abortion problem was discussed and no further action was taken by the committee.

Motion by Dr. Meredith, duly seconded and passed, that an exhibit on maternal welfare, prepared from state and/or national material, be compiled for the scientific exhibit section of the next state meeting.

Adjournment followed.

BLIND PROGRAM

Dr. John A. Billingsley, State Ophthalmologist for the Kansas State Board of Social Welfare, recently issued the following cumulative report as of December 31, 1940, on examinations and treatment furnished under the Kansas blind program.

PROGRESS REPORT

Number of the last eye report received		3,511
Number of eye examinations approved for Aid to the Blind		2,162
Number of eye examinations not eligible for Aid to the Blind		1,442
Number of eye examinations pending disposition		1
Numbers on the register not issued to cases between numbers 1 and 3,611		5
Number of cases not accepted and number was issued to report		1
Number of re-examinations made and fee allowed		278
Restoration of Sight Program		
Total number of cases approved for treatment		900
Number of cases known to have refused treatment		115
Number of cases now under treatment		146
Number of cases treatment has been cancelled		31
Total amount authorized for cases now under treatment		$13,232.15
Number of authorized treatments completed during December, 1940		18
Cases still eligible for Aid to the Blind	10	
Cases not eligible for Aid to the Blind	8	
Amount paid on 18 cases completed	$1,656.62	
Doctors' fees	56.018%	
Hospital fees	36.490%	
Optical companies fees	5.734%	
Drugs	1.758%	
Total number of cases complete at the present time		399
Number still eligible after treatment		147
Number of cases not eligible after treatment		252
Total amount paid for treatments since initiation of program		$43,701.45
Prevention of Blindness Program		
Total number of cases approved for treatment		441
Number of cases known to refuse treatment		3
Number of cases under treatment		82
Number of cases treatment has been cancelled		5
Total amount authorized for cases now under treatment		$ 3,371.50
Number of authorized treatments completed during December, 1940		10
Cases still not eligible for Aid to the Blind	9	
Cases now eligible for Aid to the Blind	1	
Amount paid on 10 cases completed	$342.66	
Doctors' fees	69.4566%	
Hospital fees	15.3213%	
Optical Companies fees	11.0897%	
Drugs	4.1324%	
Total number of cases complete at the present time		264

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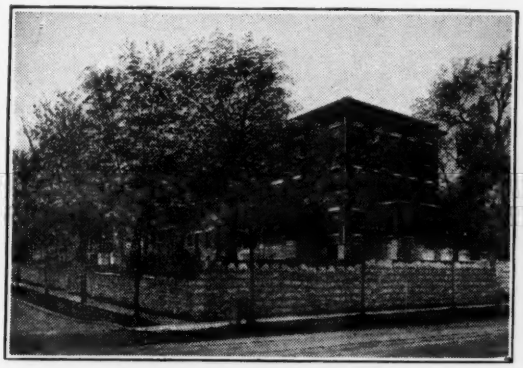

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Total number of cases eligible for Aid to the Blind after treatment	6
Total number of cases still not eligible for Aid to the Blind	258
Total amount paid for treatments, since initiation of program	$12,007.97

MEMBERS

Dr. A. C. Armitage, formerly of Kinsley, is now located in Hutchinson. Dr. C. H. Johnson of Stafford has taken over Dr. Armitage's practice in Kinsley.

Dr. Paul E. Belknap of Topeka was elected President of the Southwest Pediatrics Society at a meeting of that organization held in Kansas City in December.

Dr. M. L. Brakebill formerly of Morland is now located in Sharon Springs.

Dr. David D. Holaday has been selected as director of the newly-organized full-time health unit in Riley county. Dr. Holladay, who was formerly the director of the Marion county full-time unit, will be succeeded at Marion by Dr. John W. Turner.

Dr. Joseph W. Spearing of Columbus, full-time health officer of Cherokee County, has issued on behalf of the Board of Health of that county a pamphlet showing the public health programs completed by the Board during the past year.

COUNTY SOCIETIES

The Butler-Greenwood County Medical Society held its monthly meeting and monthly cancer conference in Eureka on January 19. Dr. W. E. Janes, Secretary of the society, has prepared and forwarded to each member of the organization a detailed recapitulation of meetings attended during the past year. Two members are shown to have attended each of the ten meetings held during the year and nine as having attended all but one meeting.

The Central Kansas Medical Society held a dinner meeting in Russell on December 5. Speakers were: Dr. P. M. Krall of Kansas City, Dr. Samuel H. Snider of Kansas City and Dr. F. L. Loveland of Topeka. The following officers were elected for 1941: President, Dr. F. N. White of Russell; Vice-President, Dr. Alza M. McDermott of Ellis; Secretary-Treasurer, Dr. E. M. Morris of Hays.

The Cowley County Medical Society held its annual banquet on December 18 in Arkansas City. Officers elected for the new year: President, Dr. H. M. Stricklin of Arkansas City; Vice-President, Dr. H. E. Snyder of Winfield; Secretary, Dr. P. F. Theis. Mr. Chandler F. Jarvis of Arkansas City spoke on legislative procedures.

The Ford County Medical Society met on December 13 in Dodge City. The following officers for the new year were elected: President, Dr. J. B. Ungles of Santanta; Vice-President, Dr. F. L. Dennis of Dodge City; Secretary, Dr. D. R. Davis of Dodge City; Treasurer, Dr. V. O. Dowler of Dodge City; Censor, Dr. G. O. Spiers of Spearville; Delegate, Dr. C. E. Bandy of Bucklin, and Alternate, Dr. J. B. Ungles. Representative of the Upjohn Company of Kansas City presented a sound film on "Sex Hormones."

A meeting of the Franklin County Medical Society was held in Ottawa on December 18, and the following officers were elected for the next year: President, Dr. R. A. Gollier; Vice-President, Dr. C. W. Henning of Ottawa; Secretary, Dr. M. E. Kaiser of Ottawa; Treasurer, Dr. P. E. Young. Dr. O. W. Davidson of Kansas City was the speaker.

The Geary County Medical Society met in Junction City during December, and elected the following officers: President, Dr. A. E. O'Donnell of Junction City; Vice-President, Dr. C. V. Minnick, of Wakefield; Secretary-Treasurer, Dr. L. S. Steadman; Delegate, Dr. E. A. Smiley of Junction City; Alternate, Dr. Robert M. Carr of Junction City, and Censor, Dr. W. A. Carr of Junction City.

The Johnson County Medical Society held a dinner meeting on December 10 in Olathe with the wives of members as guests. The following officers were elected for 1941: President, Dr. R. R. Becker of Spring Hill; Vice-President, Dr. Edmer Beebe of Olathe; Secretary-Treasurer, Dr. J. A. Knoop of Olathe; Delegate, Dr. C. W. Jones of Olathe; Alternate, Dr. D. E. Bronson of Olathe, and Censor, Dr. W. A. Carr of Merriam.

The Leavenworth County Medical Society met in Leavenworth in December and chose the following officers for the coming year: President, Dr. Paul Webster of Leavenworth; Vice-President, Dr. D. R. Sterett of Leavenworth; Secretary, Dr. H. J. Stacey of Leavenworth.

The Linn County Medical Society met in Mound City December 9. The following officers were elected: President, Dr. John T. Kennedy of Blue Mound; Vice-President, Dr. C. H. Lee of Pleasanton, and Secretary-Treasurer, Dr. H. L. Clark of La Cygne.

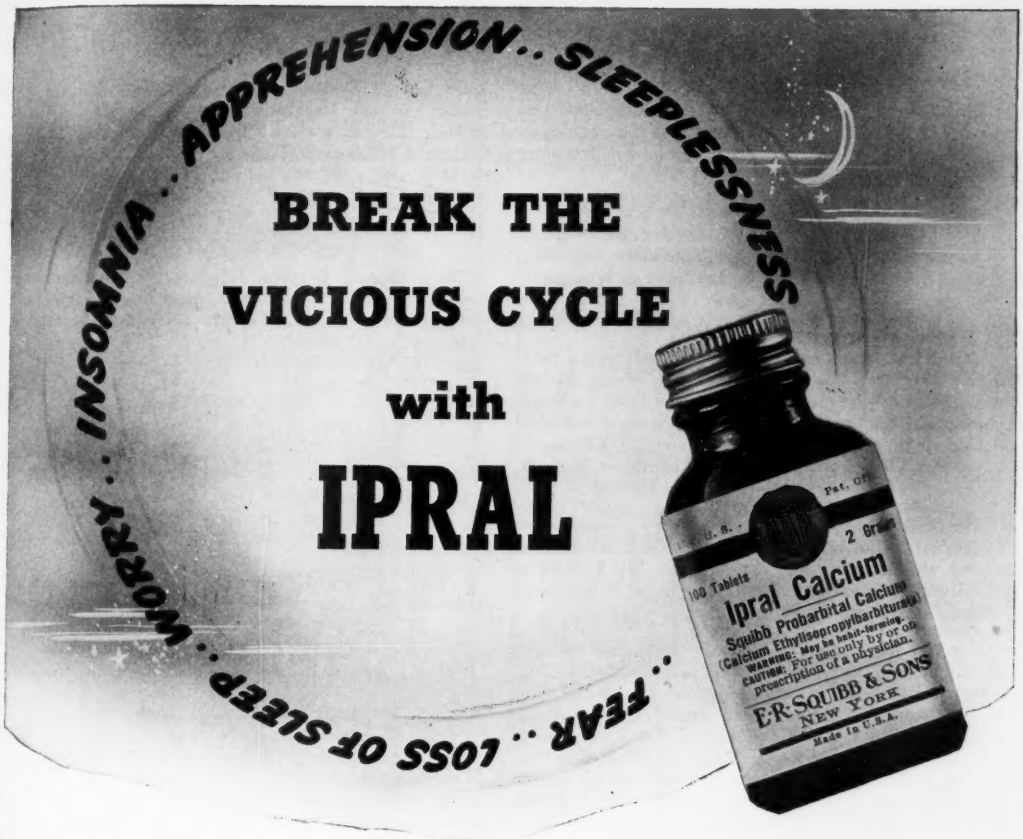
The Marion County Medical Society held their annual meeting and election of officers in Marion on December 4. The following were elected for the year 1941: President, Dr. W. M. Tate of Peabody; Vice-President, Dr. T. J. Thomas of Florence; Secretary-Treasurer, Dr. R. R. Melton of Marion; Board of Censors, Dr. A. K. Ratzlaff of Goessel; Dr. T. J. Thomas and Dr. D. D. Holaday of Marion; Delegate, Dr. R. R. Melton, and Alternate, Dr. G. J. Goodsheller of Marion. Dr. A. E. Hiebert of Wichita discussed "The Treatment of Burns," illustrating his talk with slides.

The Meade-Seward County Medical Society held a meeting on December 22 in Liberal. The following officers were elected: President, Dr. C. O. Mays of Liberal; Vice-President, Dr. E. J. McCreight of Liberal; Secretary-Treasurer, Dr. L. W. Zimmerman of Liberal.

The Miami County Medical Society held a meeting in Paola on December 11 and elected the following officers: President, Dr. S. D. E. Woods of Osawatomie; Vice-President, Dr. P. F. Gatley of Louisburg; Secretary-Treasurer, Dr. W. L. Speer of Osawatomie; and Delegate Dr. O. C. Lowe of Paola.

The Montgomery County Medical Society held a dinner meeting on December 13 in Independence with wives of the members as guests. Dr. Andre Baude, a medical officer in the French army who is visiting in Independence spoke on experiences in escaping from occupied France. Officers elected for the new year are as follows: President, Dr. James G. Hughbanks of Independence; Vice-President, Dr. J. D. McMillan of Coffeyville; Secretary, Dr. I. W. Chadwick of Coffeyville; Treasurer, Dr. G. C. Bates of Independence.

The Pratt County Medical Society held a dinner meeting on December 20, with the wives of the members as guests. The following officers were elected for 1941: President, Dr. Herbert Atkins of Pratt; Vice-President, Dr. Cyril V. Black of Pratt; Secretary-Treasurer, Dr. Athol Cochran of Pratt; Censors, Dr. F. A. Thorpe of Pratt, Dr. W. D. Pit-



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man of Pratt, and Dr. Marshall Christman of Pratt; Delegate, Dr. J. R. Campbell of Pratt, and Alternate, Dr. Cyril V. Black.

The Shawnee County Medical Society held a meeting on January 6 in Topeka. Dr. A. D. Gray of Topeka spoke on "Sulfanilamide and Its Derivatives in the Treatment of Genito-Urinary Infections."

A meeting of the Southeast Kansas Medical Society was held in Chanute on December 12. Speakers were: Dr. F. C. Carmichael, Jr., of Kansas City, who spoke on "Diagnosis of Brain Abscess," and Dr. Lee Leger of Kansas City who spoke on "Therapeutic Uses of the Sulfanilamide Group of Drugs."

The Washington County Medical Society held a meeting on December 10 in Washington. Dr. Warren Morton of Green spoke on "Pneumonia Treatment From the Standpoint of the Country Doctor." The following officers were elected for the year 1941: President, Dr. L. J. L'Ecuyer of Greenleaf; Vice-President, Dr. H. G. Hurtig of Hanover; Secretary-Treasurer, Dr. F. H. Rhoades of Hanover.

The Wilson County Medical Society held a meeting on December 16 in Fredonia. The following officers were elected for the new year: President, Dr. W. T. Rich of Neodesha; Vice-President, Dr. O. D. Sharpe of Neodesha; Secretary-Treasurer, Dr. E. C. Duncan of Fredonia.

The Wyandotte County Medical Society held its 46th annual banquet for the installation of officers at the Milburn Country Club in Kansas City on January 18. The following officers were installed: President, Dr. E. F. De Vilbiss of Kansas City; Vice-President, Dr. T. J. Sims of Kansas City; Secretary, Dr. C. A. Gripkey of Kansas City; Treasurer, Dr. W. W. Summerville of Kansas City; Censor, Dr. E. S. Miller of Kansas City; Delegates, Dr. H. L. Regier of Kansas City and Dr. T. G. Dillon of Kansas City.

DEATH NOTICES

Dr. William H. Jones, 63 years of age, died on November 7 in Ashland, of coronary thrombosis and chronic nephritis. Dr. Jones was graduated from the Lincoln Memorial University Medical Department of Knoxville, Tennessee in 1900. He was a member of the Ford County Medical Society.

Dr. John H. Rose, 63 years of age, died on November 27 in Kansas City, of lobar pneumonia following a ruptured appendix. Dr. Rose was graduated in 1906 from the University of Kansas School of Medicine. He was a member of the Wyandotte County Medical Society.

Dr. George W. Shadwick, 78 years of age, died on Decmeber 5 in Iola. Dr. Shadwick was born in Jacob, Illinois, in 1862. He was graduated from the Homeopath Medical College of Missouri, St. Louis, in 1900. He was a member of the Allen County Medical Society.

ANNOUNCEMENTS

The American College of Surgeons, 40 East Erie Street, Chicago, announces the following sectional meetings:

DATES	CITY	HDQTS. HOTEL	PARTICIPATING STATES
March 10	Minneapolis	Nicollet	Minnesota
11	Minnesota		North & South Dakota
13			Iowa, Nebraska, Montana, Kansas, Wisconsin, Manitoba
March 17	Pittsburgh	Wm. Penn	Pennsylvania, Ohio,
18	Pennsylvania		Virginia, West
19			Virginia, Delaware, Maryland, New Jersey, New York, District of Columbia
March 26	Salt Lake	Utah	Oregon, Washington,
27	City		California, Nevada,
28			Idaho, Wyoming, New Mexico, Arizona, Colorado, Montana, Utah

Hospital conferences will be held in connection with each of these meetings. Fellows of the College, members of the medical profession at large, and persons interested in the institutional care of the sick and injured, are invited to the Sectional Meetings; on the final evening of each meeting, a Meeting on Health Conservation to which the public is invited, will be held.

The American Association for the Study of Goiter again offers the Van Meter Prize Award of Three Hundred Dollars and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The award will be made at the annual meeting of the Association which will be held at Boston, Massachusetts, May 26th, 27th and 28th, providing essays of sufficient merit are presented in competition. The competing essays may cover either clinical or research investi-

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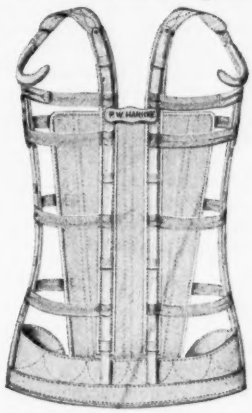

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gations; should not exceed three thousand words in length; must be presented in English; and a typewritten double spaced copy sent to the Corresponding Secretary, Dr. W. Blair Mosser, 133 Biddle Street, Kane, Pennsylvania, not later than April 1st. A place will be reserved on the program of the annual meeting for presentation of the Prize Award Essay by the author if it is possible for him to attend. The essay will be published in the annual Proceedings of the Association. This will not prevent its further publication, however, in any journal selected by the author.

The Eighteenth Annual Meeting of the American Orthopsychiatric Association, an organization for the study and treatment of behavior and its disorders, will be held at the Hotel Pennsylvania, New York City, on February 20, 21 and 22, 1941. A registration fee will be charged for nonmembers. Preliminary program will be sent on request. For information write Helen P. Langner, M.D., Chairman, Publicity Committee, 1790 Broadway, New York City.

BOOK NOOK

BOOK REVIEWS

MENTAL THERAPY (studies in 50 cases) Volumes I and II—Louis S. London, M.D.; Covici-Friede, Publishers, New York.

The first five chapters of book one deal principally with fields of psychotherapy and the rest of the two volumes are organized along the metapsychology of the author's interpretations. Other parts of the book deal with the case histories of various types of neuroses, borderline conditions, psychoses, and character disorders. Although the author gives excellent case material, the analytic interpretations are given very glibly and therapeutic responses are sometimes amazing. All of the described cases could not possibly be called analyzable in an orthodox sense, and modified techniques creep into the discussion. As far as can be learned, the author is not a recognized analyst but is a psychiatrist with psychoanalytic orientation and he seems to be oblivious to many phenomena in analytic patients—such as resistance and transference problems. Some of the author's cases, while theoretically correct, seem to be handled along the lines of "wild analysis" which has brought so much disrepute to psychoanalysis in this country. The book is interesting to read but a poor guide as to how to conduct formal psychotherapy. —H.C.

TEXTBOOK OF NERVOUS DISEASES—Robert Bing and Webb Haymaker. Price $10.00. Pp. 838. C. V. Mosby Company, St. Louis. 1939. Fifth Edition. This is an excellent textbook of neurology and makes use of both European and American sources. It is beautifully illustrated and shows evidence of much augmentation and rearrangement, in keeping with modern advances in neurology. The base of the text is derived from the fifth German edition by Professor Robert Bing, Professor of Neurology at the University of Basel, Switzerland.

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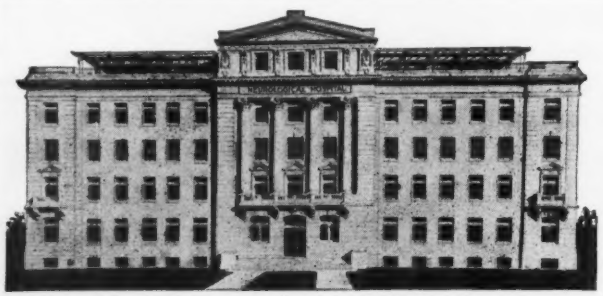

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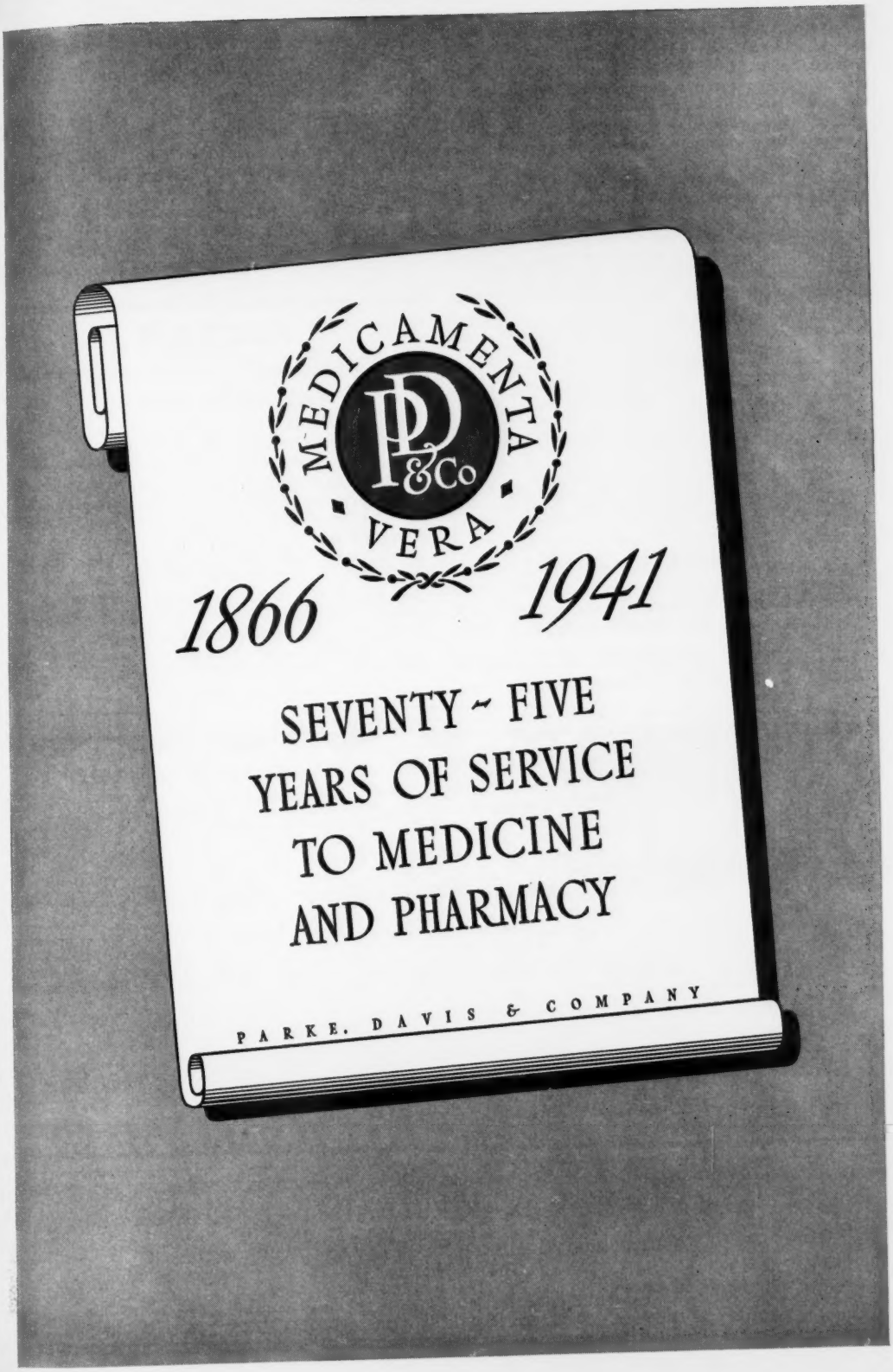
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A rather unusual arrangement of the chapter headings is noted, which deviates somewhat from the more orthodox textbooks in neurology. Modern neurological and neurosurgical techniques are mentioned in treatment, as well as the recent developments in chemotherapy, including sulfanilamide and sulfapyridine in infectious processes. There is an excellent discussion of diseases of the autonomic nervous system, as well as a whole chapter on the subject of headaches. Unfortunately, the book begins to lose some of its stride when one reaches the final three chapters devoted to the psychoneuroses. These chapters include a lot of loose terminology, with a tendency to stick to "old school' techniques and a rather hostile attitude toward psychoanalytic doctrine is taken. This reviewer would recommend that everyone read the last page and a half of the book to elicit the psychiatric attitudes of the author. As for psychotherapy the last paragraph and final footnote are the final blows to an otherwise extraordinary textbook. —H.C.

COMPLETE GUIDE FOR THE DEAFENED—A. F. Niemoeller, A.B., M.A., B.S. Published by Harvest House, 70 Fifth Ave., New York, N. Y., priced at $3.00. The book is designed and written to serve as a practical guide so that the deafened may be lead to a fuller and richer life. The authors advice is explicit. He has attempted to point out helpful, constructive measures and advices available to the deafened with warning against the fraudulent and harmful.

KANSAS MEDICAL ASSISTANTS

The medical assistants of Manhattan recently held an organization meeting, elected officers and adopted a constitution and by-laws. Their group is composed of twelve members.

The Topeka Medical Assistants Society met on January 6. Mr. C. M. Rankin, Dean of Highland Junior College, Highland, Kansas, discussed "Medical Secretaries Training in the Junior Colleges of America." Twenty-five members attended the meeting.

The Sedgwick County Medical Assistants Society met at a joint Christmas meeting with the Medical-Dental Assistants' Society and the Dental Secretaries on December 18. Mrs. H. A. Allison reviewed Hans Zinsser's "As I Remember Him," and the Wichita Civic Boys' Choir sang several numbers.

The state secretary reports the issuance of 156 membership cards to members of the Kansas Medical Assistants Society. If your group has not organized—January, 1941, is an ideal time to do so. Margaret MacKenzie, President.

AUXILIARY

PRESIDENT'S MESSAGE

Another mile post—the holidays—is passed and our real working months are ahead. This is the time of the year when we make inventory and check our goal for the year.

First are we stressing self education and public education in health education? Second, are all committees functioning? Third, are plans being made for one Public Relations Meeting or Tea?

Both Dr. C. Omer West, our Advisory Chairman, and Mrs. Reifsneider, our Public Relations Chairman, are especially urging us to have the public relations meeting with questions from your community answered by a physician. These were very successful where used last year.

Our State Board voted to recommend that each auxiliary subscribe for the Bulletin for the use of its president. We hope she will share it with others too.

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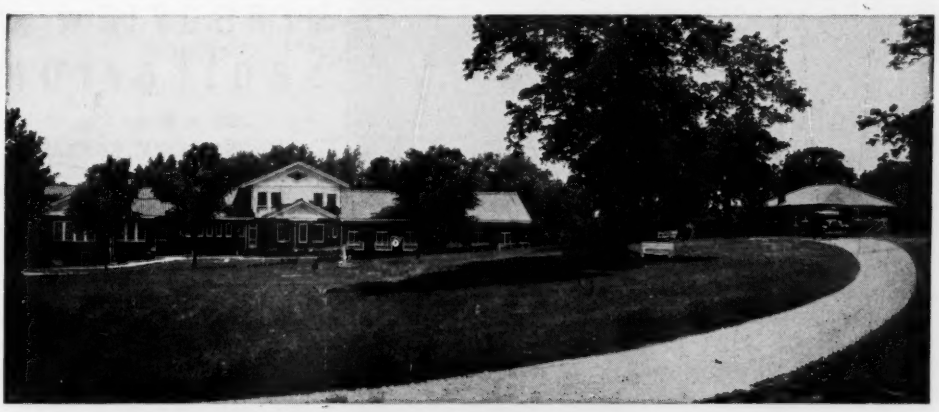

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PAST PRESIDENTS ATTEND

Five of our Past Presidents, Mrs. Basham, Mrs. Duncan, Mrs. Nodurfth, Mrs. Urie and Mrs. Spake, were present at our State Board meeting. Four officers, three standing committee chairmen, four councilors and five county presidents attended and encouraging reports were sent by many of our members who could not be with us.

REPORTS

Our State Board voted to have our yearly reports printed again this year, so we shall need to have all reports in by March 15. Please turn to your Hand Book now and study the suggested outlines for your own committee work as this will help you in March in making out your report.

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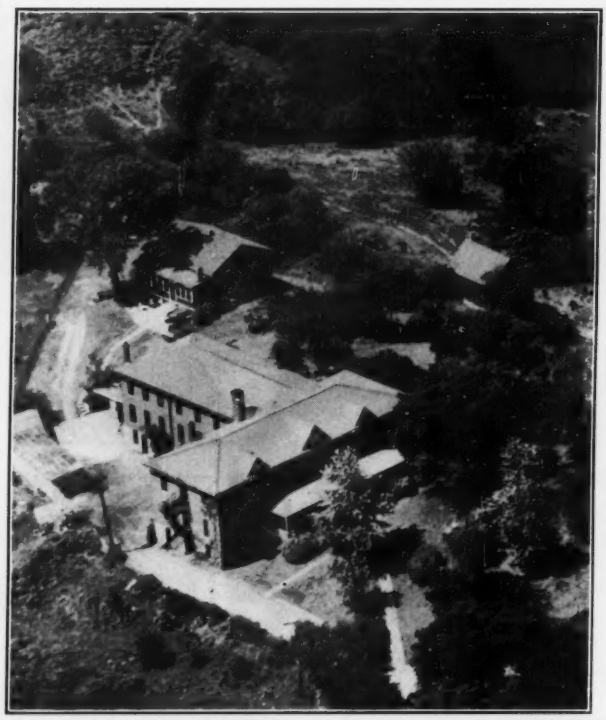

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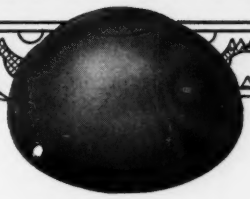

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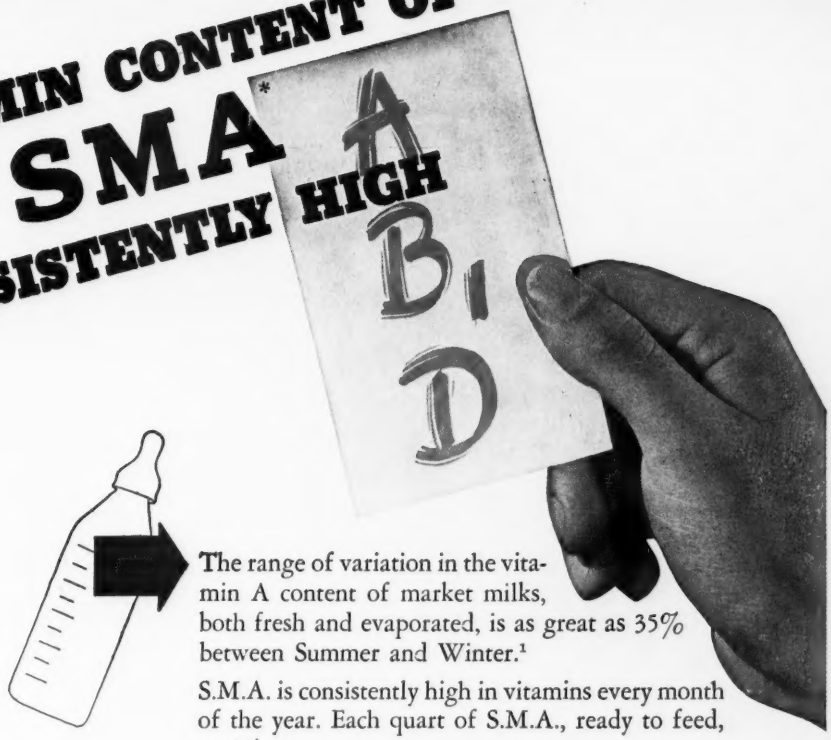

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